KARNATAKA STATE
MAKING PROGRESS TOWARDS
REALISING SDG - 3

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FOREWORD BY DR. DEVI SHETTY

In 2015, leaders from 193 countries of the world came together under the United Nations and developed a plan called the Sustainable Development Goals (SDGs). These are a set of 17 goals that aim to rid the world of poverty and hunger, and make it safe from the worst effects of climate change, in just 15 years.

Sustainable Development Goal 3 deals with good health and wellbeing, and aims to ensure healthy lives and promote wellbeing for all at all ages.

Karnataka, which is one of the more progressive states in southern India, ambitiously constituted 17 committees, each under a Chairperson, to come up with attainable targets, one set to be achieved by the year 2022 and the next set to be achieved by 2030. Each committee is to develop details of how the targets are to be achieved, along with the required budget allocation.

The SDG 3 (Health) Committee, ably steered by its Chairman Dr. Alexander Thomas, has been able to gather and compile input from over 35 experts from across the country with special reference to Karnataka-specific issues. This document very explicitly outlays details for the pathway towards achieving the predicted goals, taking into account all available systems of healthcare. Special mention must be made of the inclusion of yoga in preventive healthcare, which is to be implemented. The care of the elderly is another area that is emphasised upon in this document, and must be given greater importance.

Karnataka is one of very few states in India blessed with ample resources in clinical care, public health and management, and abundant talent in technology. Considering the palpable shift in disease pattern, with more than 50% of urban and rural populations suffering from Non-Communicable Diseases (NCDs), Karnataka is equipped to shift the focus in addressing NCDs and basic surgical needs (called bellwether procedures covering emergency caesarean section, laparotomy for burst appendixes and compound fractures). This shift in focus will also complement the eradication of infectious diseases.

With a few pragmatic policy changes, we can adopt technology to overcome most of the hurdles faced in infrastructure, the health workforce and access to healthcare. This document can serve as a guiding template to steer Karnataka in becoming a model state to be emulated by other states in India, as well as by other developing countries, to exceed the targets of SDG-3.

Dr. Devi Shetty

Chairman and Executive Director

Narayana Health

FOREWORD BY DR. R. NAGARTHNA

Mahatma Gandhi said, "The future depends on what we do in the present". What we do today will determine the future of the health of the world. Therein lies the immense responsibility on our shoulders: developing the right policies and initiatives for the future of healthcare.

According to the Global Burden of Disease Study 2017, although globally, life expectancy was 73 years, *healthy* life expectancy was only 63 years, with an average of 10 years of life spent in poor health. With a 41% decrease in communicable diseases and neonatal disorders, and a 40% increase in non-communicable diseases, there has been a considerable shift in the leading risk factors between 1990 and 2017: from child wasting, preterm births and low birth weight for gestation, to lifestyle-related diseases such as high blood pressure, diabetes, cancer, depression, etc. This calls for a different approach: looking at health in a holistic manner and prioritising preventive healthcare over curative healthcare, the former being more cost-effective. SDG-3, with its goal to "ensure healthy lives and promote well-being for all at all ages," evidently emphasises wellness rather than treating illness.

In realising the clarion call by Swami Vivekananda to combine the best of the east with the best of the west, our efforts to integrate modern medicine with the holistic approach of the traditional ancient AYUSH systems with scientific evidence, have led to exceptional results in the prevention and management of non-communicable diseases and lifestyle disorders.

I am pleased to see that the SDG-3 policy document by the Government of Karnataka recognises this integrated approach for the wellness of citizens as its core agenda and prioritises prevention by using a target-based approach.

I am very happy to say that the SGD-3 policy document will be an immense contribution to the state of Karnataka and I hope there is enough scope to innovate and further improve the policies as we learn more in the due course of its implementation, with an agenda to "reach the last first". I appreciate the efforts of all the experts who have contributed to this policy document and I am optimistic that this document will not only guide the state of Karnataka but also be a reference document for the country and the world.

Dr. R. Nagarthna, MBBS, MD, FRCP

Medical Director

Arogyadhama, VYASA,

Bengaluru

FOREWORD BY DR. C. N. MANJUNATH

India is facing a double burden of Communicable and Non-Communicable Diseases (NCDs). In the last two decades, there has been a shift towards NCDs such as cardiovascular disease, hypertension, diabetes, stroke and cancer; changes in food habits, food products, air pollution, urbanisation, disintegration of the joint family system and stress have contributed towards this surge in lifestyle diseases.

Despite technological advances, the need of the hour is to combat malnutrition, provide safe drinking water and organic food, and improve the quality of air. It is also essential to promote and streamline institutional deliveries to bring down maternal and infant mortality. Annually, 25% of deaths annually in India are due to acute myocardial infarction; these patients should receive thrombolysis/coronary angioplasty or thrombolysis-cum-angioplasty within 3-6 hours. Even MBBS doctors with a few weeks of training in the Intensive Coronary Care Unit should be able to manage heart attack patients initially before shifting them to tertiary coronary care.

The State and Central health insurance schemes for the poor and under-privileged, while good initiatives, need periodic revisions in the package rates so that more hospitals can be empanelled. The current rates do not meet the actuals, and some complex procedures cost double the package rates and are not covered by the schemes. The situation of medical colleges in our country must be addressed by the Government and Medical Councils; there are more medical colleges in South India where only 40% of the population live; and fewer in the North, where 60% of the population lives. The opening of new medical colleges in the South should be stopped.

Adequate infrastructure, a conducive working atmosphere, and reservations in PG Education for those working in rural areas will attract more doctors to work in semi-urban and rural areas, which is a great matter of concern at present. Healthcare policies need to be revised and amended periodically. Policymakers should focus on strengthening the existing medical colleges: promoting decentralization and delegation of powers, and increasing manpower such as doctors, nurses and paramedical staff. The selection of directors and medical superintendents should depend on leadership qualities, team concepts and dynamism rather than seniority.

I congratulate Dr. Alexander Thomas and his team for their vision and hard work in bringing out documents and guidelines to shape policies for healthcare providers in India.

Dr. C. N. Manjunath
Director
Shri Jayadeva Institute of Cardiovascular Sciences and Research
Bangalore

MESSAGE FROM THE CHAIRMAN

It is my pleasure to present this policy document to steer Karnataka's achievement of the targets within Goal 3 of the Sustainable Development Goals. These Karnataka-specific targets have been developed by the SDG-3 Committee, comprising healthcare and development experts from across the country, and are also aligned with our national targets.

The committee as a whole met seven times, with additional meetings of the different sub-committees, both face-to-face and via conference calls. The Health Department was actively involved in the process, especially the Principal Secretary. There was robust interaction between members and contributions from other departments as well. Special mention must be made of the inclusion of AYUSH within these targets, with AYUSH experts meeting separately to develop indicators in that area.

The entire exercise, from the initial consultation to the submission of this document, took over a year. The draft report was sent to internationally-renowned experts working in the field and their input was also incorporated.

On behalf of the committee, I thank the Government of Karnataka for taking the initiative to make Goal 3 a reality for all, and for giving us the opportunity to steer this process. We hope that these recommendations will be implemented, and result in a positive outcome for our State.

Dr. Alexander Thomas

Chairman

SDG Committee for Goal 3 (Health)

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• Shri. Chakravarthi Mohan, IAS, Secretary to Government, Planning, Programme Monitoring and Statistics Department.

• Shri. Ajay Sheth, IAS, Former Additional Chief Secretary to Government, Health & Family Welfare Department.

Members of the SDG Committee for Goal 3

• Dr. Alexander Thomas, Chairman

• Shri. K. S. Shankar, Member-Secretary

• Shri. Rajneesh Goel, IAS

• Shri. I.S.N. Prasad, IAS

• Shri. M. Lakshminarayana, IAS

• Ms. Smita Bijjur, CEO, KEA, GoK

• Dr. Sanjay Pai, Consultant Pathologist, Columbia Asia Hospital

• Dr. Vinod Joseph Abraham, Professor, Department of Community Health, Christian Medical College, Vellore

• Dr. Darshan Shankar, University of Trans-Disciplinary Health Sciences and Technology

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• Dr. V. C. Shanmuganandan, Advisor, Association of Healthcare Providers - India

• Dr. Jyotsna Jha, Director, Centre for Budget and Policy Studies

• Mr. Bhargav Krishna, Research Fellow and Executive Aide to the President, Public Health Foundation of India

• Dr. Elkan Daniel, Swasti Health Resource Centre

• Dr. Manu Mathur, Senior Research Scientist and Associate Professor, Public Health Foundation of India

• Ms. Divya Alexander, Research Consultant, Association of Healthcare Providers - India

• Shri. K. Narayana, Senior Director, Planning Department

- Dr. T. S. Prabhakar, Director, Health and Family Welfare
- Dr. B. Janakiram, Joint Director, Planning

- Dr. Arun Kumar, Deputy Director, Health Department
- Smt. M.R Girija, DySP, Police Chief Office
- Shri. Shambulingaiah, Under-Secretary, Representative from the Social Welfare Department
- Dr. Shrikanth Basur, Deputy Director and Nodal Officer, Health Department
- Dr. S. B. Patil. Deputy Director, KSAPS
- Dr. B. N. Prakash, Scientist, University of Trans-Disciplinary Health Sciences and Technology
- Dr. K. V. Naveen, President, INGYMA
- Dr. B. Shrinivas Prasad, Principal, KLE Belgaum
- Dr. Shridhar B S, JD, Ayush
- Dr. Ahalya, Principal, Ayurvedic Government Medical College
- Smt. Rajeshwari Prasad
- Shri. Ananta S. Desai, PD, NAM
- Dr. B N Sumathi, Under-Secretary, Social Welfare Department
- Shri. Kantharaju, Deputy Director, Planning
- Ms. V. Susheela, Under-Secretary, (I/C) Home Department
- Shri. I. Vijayakumar, Deputy Secretary, Home Department
- Dr. Lavanya, Yuva Spandana Programme Coordinator, Centre for Public Health, Department of Epidemiology, NIMHANS
- Dr. Roopa S, Lead Consultant, SDGs, NFI, Planning, Programme Monitoring and Statistics Department
- Ms. Kirthi Soni, Consultant, SDGs, NFI, Planning, Programme Monitoring and Statistics Department

External Experts

- Dr. Srinath Reddy, President, Public Health Foundation of India
- Dr. Sudarshan, Secretary, Karuna Trust
- Dr. Ravinarayan, Community Health Advisor, Centre for Public Health and Equity, Society for Community Health, Awareness, Research and Action (SOCHARA)
- Dr. Sankaran Valiathan, National Research Professor, Manipal University School of Life Sciences
- Dr. Jayaprakash Muliyil, Former Professor and Head, Community Medicine, CMC Vellore

- Dr. Girdhar Gyani, Director-General, Association of Healthcare Providers - India
- Dr. Prem Mony, Professor, Community Health and Epidemiology, St John's Medical College and Research Institute

Copy Editing

- Ms. Divya Alexander, Research Consultant, Association of Healthcare Providers India

Secretarial Support Staff from the Planning, Programme Monitoring and Statistics Department

- Smt. Shilpa S, Deputy Director
- Shri. Nanjundachari S, Assistant Director
- Shri. Shivananda Sabanesa, Assistant Statistical Officer
- Shri. Nanjundachari H.K, Assistant Statistical Officer
- Ms. H.C Yashodha, Stenographer
- Shri. Sumanth

Secretarial Support from AHPI

- Mr. Shadrach Thangaraj

SECTION 1:

SITUATIONAL ANALYSIS

A. INTRODUCTION:

Karnataka is the 7th largest and the 8th most populated state of India. In recent decades, the state has emerged as one of the major economic center in India in terms of industrial growth. While the state is generally performing better than the national averages on several key indicators of health, there is room for improvement in many areas to accelerate the achievement of the global goals for health and development. The National Family Health Survey 2015-16 (NFHS-4) provides statistics for the key indicators and trends for Karnataka. The NFHS-4 estimates the Infant Mortality Rate (IMR) as 19 per 1,000 live births in urban settings and 32 per 1,000 live births in rural settings. The under- five mortality rate (U5MR) for the same is 23 and 37 per 1,000 live births for urban and rural areas respectively. The prevalence for Cardiovascular Diseases (CVDs) was further estimated to be 821 women per 100,000 and 739 men per 100,000. Prevalence of cancer was estimated to be 330 women per 100,000 and 81 men per 100,000. The Global Burden of Disease (2016-17) study projected the mortality rate attributed to Diabetes as 42.0 (age-standardized per 100,000 population). Nearly, 35.2% of men, 10.3% of women and 22.8% of adults in Karnataka are tobacco consumers as per the recent Global Adult Tobacco Survey (Round – 2).

B. COMPARISON ACROSS INDIA AND OTHER STATES:

When we look into the distribution of deaths by major cause groups across India, NCDs comprise of over 50% of all deaths both among males and females. This is followed by 28-33% of deaths due to Communicable Diseases (CDs) and 9-12% of deaths due to injuries[1]. Comparison of National data with Karnataka state data (2007-2013) shows deaths due to Non- Communicable Diseases (NCDs), among both males and females is slightly higher in Karnataka while deaths due to Communicable diseases is significantly lower in both sexes than national level pointing towards an increased focus required to prevent and control NCDs.

Distribution of deaths among males and females in urban and rural areas of Karnataka is shown in Figure 1. Non communicable diseases (NCDs) are the leading cause of death in all

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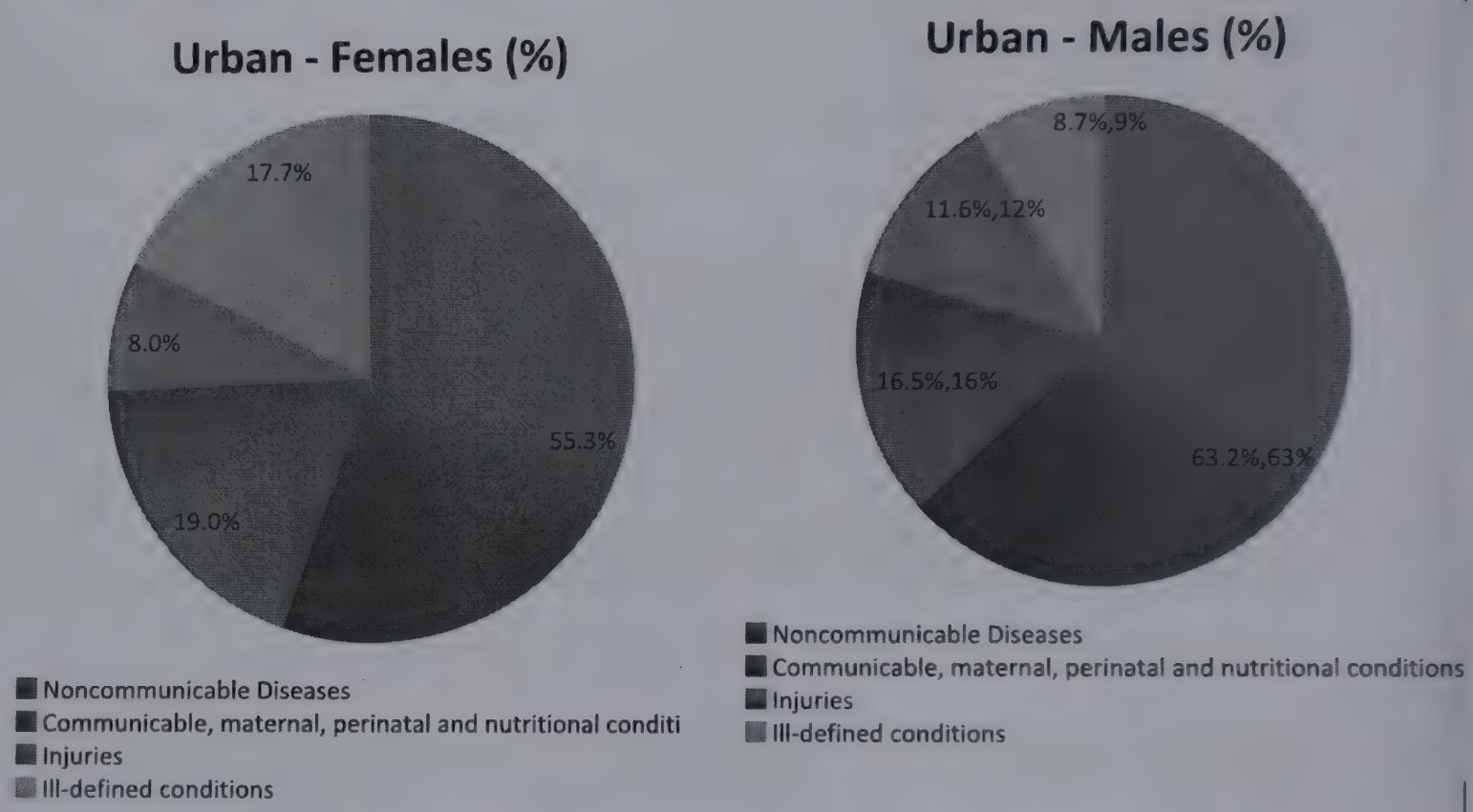
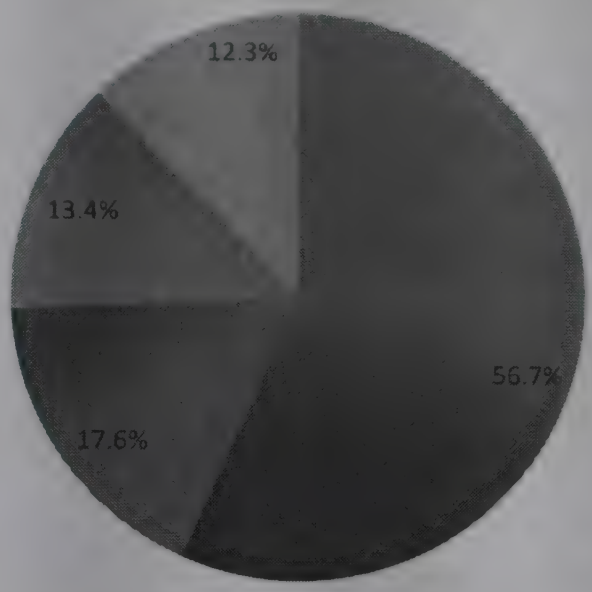
[1]Causes of death statistics 2007-2013

four groups; however there is substantial difference in the relative proportion contributed in the four groups – while among urban males, nearly two-thirds of the deaths are due to NCDs, at the other extreme, just under half the deaths in rural females are due to NCDs. Males suffer from injuries more than females while females die more than males due to communicable, perinatal and nutritional conditions.

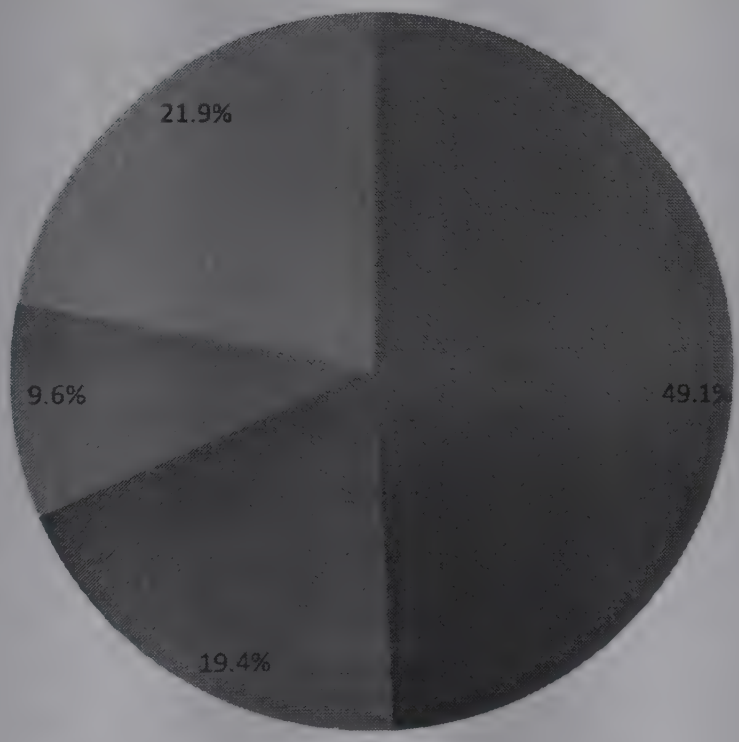
Figure 1. Cause of death distribution among males and females in urban and rural areas of Karnataka (2007-2013)



Rural - Males (%)



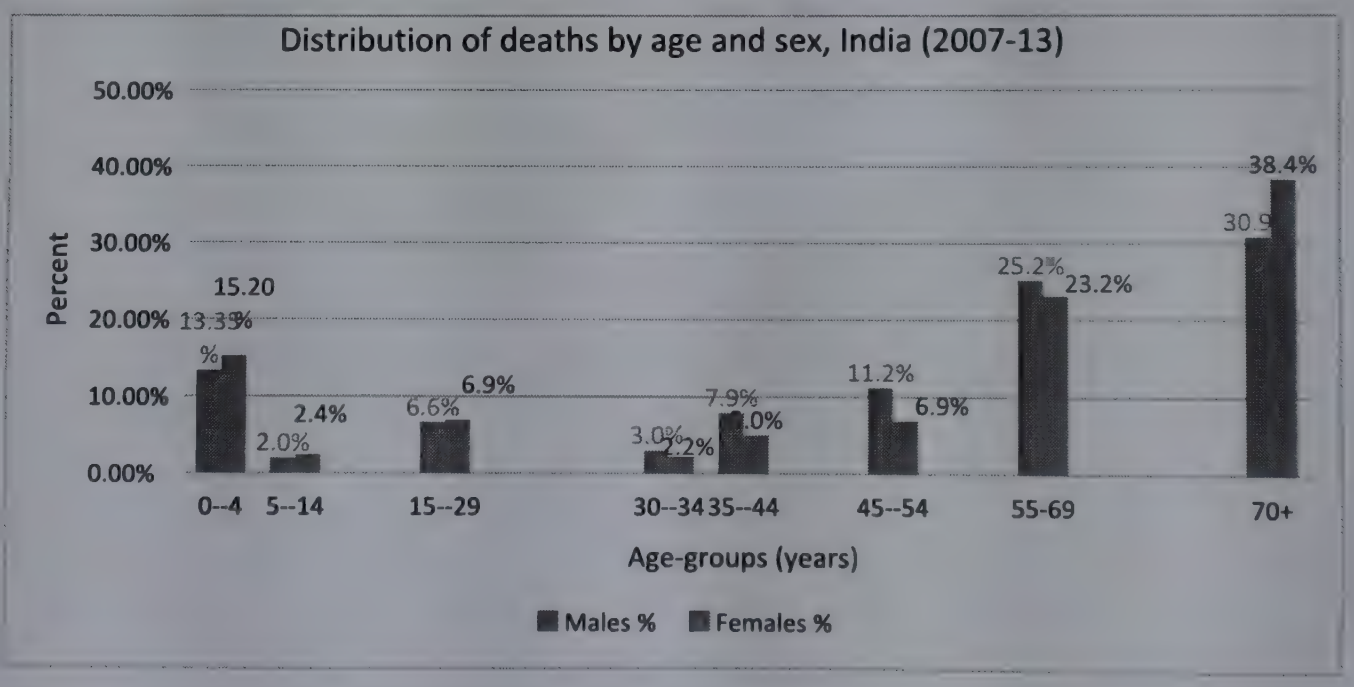
Rural - Females (%)

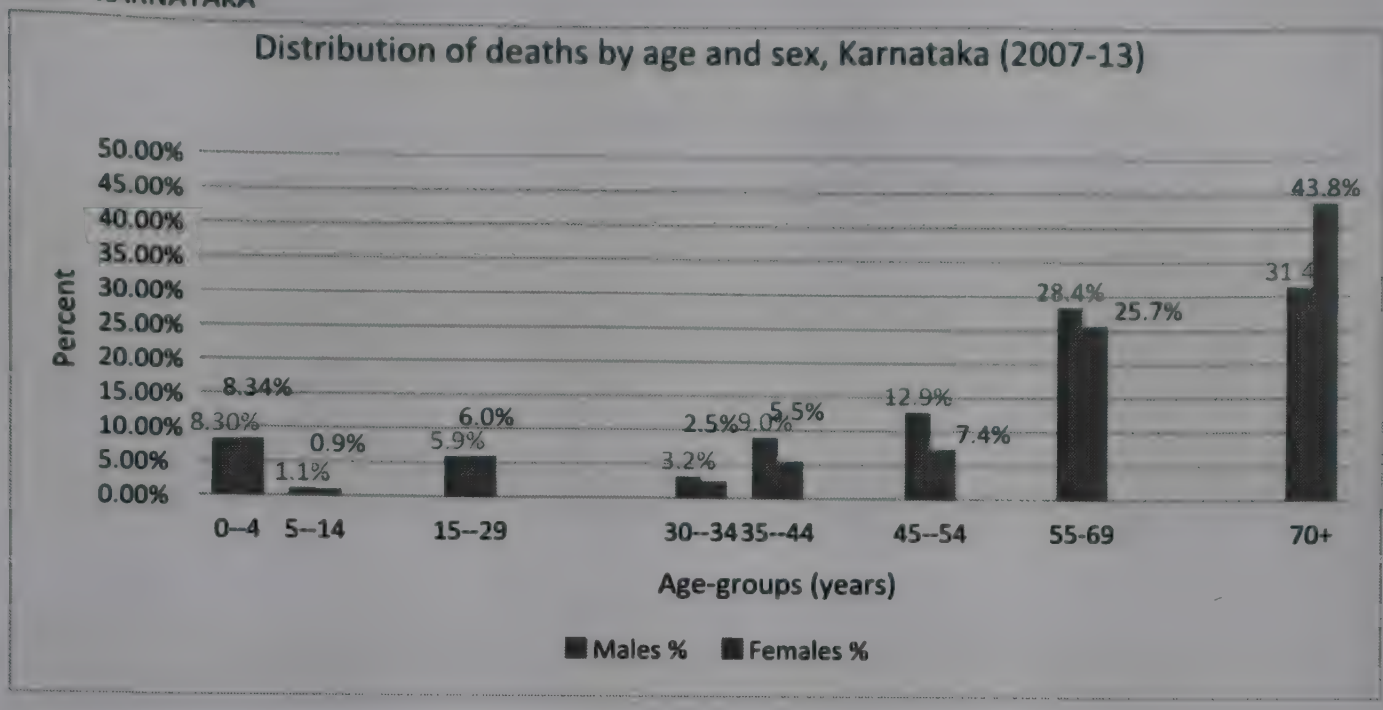


Mortality is highest at extremes of ages and low in between except for a small blip in the 15-29 year age-group of adolescents and young adults, due to injuries and maternal causes of deaths in both the national level as well as in Karnataka state (Fig 2). However, male-female mortality differential in the younger age-groups is substantially different between India and Karnataka. While in Karnataka, proportion of all deaths among females in the under-5 age-groups is only marginally higher compared to among males (8.34% vs. 8.30%) as usually seen in southern states, the average for India is 15% substantially higher for females compared to males (15.2% vs. 13.35%) indicating much higher discrimination against the girl child in the rest of India as compared to Karnataka.

In the middle age of 35-70 years, male mortality is higher than female mortality; and greater proportions of female deaths above the age of 70 years as compared to males indicates longer life expectancies for females – this difference is more marked for Karnataka (Fig 2).

Figure 2. Distribution of deaths by age and sex during 2007-2013 in India and Karnataka





C. HEALTHCARE CHALLENGES FOR THE GOVERNMENT:

Even though the state has achieved much in terms of preventive medicine, it still faces a number of healthcare challenges. It is important to offer support for those who are disadvantaged, the key strategy is to provide effective health interventions to everyone irrespective of their income. Some of the key challenges faced by the government are as follows:

- Improving Quality of Essential Health Services
- Strengthening of organization and management of health systems
- Enhancing Transparency and Accountability
- Addressing optimal distribution and utilization of human resources for health
- Overcoming Poor Health Literacy

Health Policy of Karnataka:

Karnataka's health policy aims at providing access to good healthcare and strengthening the state health system. The state endeavors to provide quality health care uniformly to its population. Karnataka's health policy goals include to:

SDG – KARNATAKA

1. Provide integrated and comprehensive primary healthcare
2. Establish a credible and sustainable referral system
3. Ensure equity in delivery of quality healthcare
4. Encourage greater public private partnership in provision of quality healthcare in order to improve service delivery in the underserved areas
5. Address emerging issues in public health
6. Strengthen health infrastructure
7. Develop health human resources
8. Improve access to safe and quality drugs at affordable prices
9. Increase access to alternative systems of medicine

SECTION 2:

SUSTAINABLE DEVELOPMENT GOALS

A. WHAT ARE SUSTAINABLE DEVELOPMENT GOALS?

United Nations in 2015 presented the 17 goals and 169 targets of the Sustainable Development Goals to be achieved by 2030 built on the Millennium Development Goals (MDGs). The SDGs were a result of complex consultation process involving UN member states, civil society, the corporate sector and many other stakeholders and individuals from around the world (United Nations General Assembly, 2015). The SDGs aim to initiate action, while guiding policymaking and accountability for the elimination of poverty, promotion of prosperity, furthering of peace and justice, and conservation of the planet's resources for further generations.

Health is integral to many SDGs and contributes to their achievements, but also benefits from progress in sustainable development. It has been argued that the challenges of the wider social determinants and risk factors to health can only be successfully tackled through a "grand convergence" through using a public health system's approach.

While the SDG goals and targets set a global context, they have been designed in a way so that they can be adapted locally to meet the specific challenges.

The 17 goals are (Figure 3)

Figure 3

B. WHAT IS HEALTH SUSTAINABLE GOAL?

Goal 3 of the SDGs agenda seeks to *'ensure healthy lives and promote well-being for all at all ages'* includes 13 health targets.

Figure 4

The targets and indicators of the Health SDGs are as follows(United Nations, 2018):

SDG – KARNATAKA

- 3.1 By 2030, reduce the global maternal mortality ratio to less than 70 per 100 000 live births.
- 3.2 By 2030, end preventable deaths of newborns and children under 5 years of age, and reduce neonatal mortality to at least as low as 12 per 1000 live births and under-5 mortality to at least as low as 25 per 1000 live births.
- 3.3 By 2030 end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases
- 3.4 By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being.
- 3.5 Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol
- 3.6 By 2020, halve the number of global deaths and injuries from road traffic accidents.
- 3.7 By 2030, ensure universal access to sexual and reproductive health-care services, including family planning, information and education, and the integration of reproductive health into national strategies and programmes.
- 3.8 Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all.
- 3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.
- 3.A Strengthen the implementation of the WHO Framework Convention on Tobacco Control
- 3.B Support the research and development of vaccines and medicines for the communicable and non-communicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration.
- 3.C Substantially increase health financing and recruitment, development, training and retention of the health workforce.
- 3.D Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks

C. CURRENT INITIATIVES BY GOVERNMENT OF INDIA:

Various initiatives by the Government of India are working to achieve SDG Goal 3, which include reducing mortality, reducing the spread of communicable and non-communicable diseases and ensuring universal health coverage. Following is the snapshot of some of them:

- **National Health Mission (NHM)**, which includes two sub-missions—National Rural Health Mission (NRHM) and National Urban Health Mission (NUHM)- To provide universal access to health care
- **Ayushman Bharat - Pradhan Mantri Jan Aarogya Yojana (PMJAY)** is a National Health Protection and universal health coverage scheme which aims to provide coverage of up to 5 lakh rupees per family per year for secondary and tertiary care hospitalization
- **Mission Indradhanush** – Aimed at providing full immunization coverage in India to at least 90% children by December 2018
- **National Tuberculosis Control Program (RNTCP)** – Provide affordable and appropriate TB treatment to those in need
- **National Leprosy Eradication Program** - To reduce leprosy cases. Integrated Disease Surveillance Program (IDSP) aims to monitor disease trends and to detect and respond to outbreaks in early rising phase
- **National Mental Health Program (NMHP)** - To improve the access of mental healthcare services. National Program for control of blindness to reduce the cases of blindness
- **National Program for Prevention and control of cancer, diabetes, cardiovascular diseases and stroke (NPCDCS)** - Reduce premature mortality and morbidity from non-communicable diseases

D. PERFORMANCE OF GOAL -3: KARNATAKA

To measure Karnataka's performance on the Goal of Good Health and Well-being, five national level indicators have been identified by NITI Aayog's *"SDG India Index, Baseline Report, 2018"*. The report captures four out of the 13 SDG targets outlined for 2030.The five indicators for the report are as follows:

- Maternal Mortality Ratio

SDG – KARNATAKA

- Under-five mortality rate per 1,000 live births
- Percentage of children aged 12-23 months fully immunized (BCG, Measles and three doses of pentavalent vaccine)
- Annual notification of Tuberculosis cases per 1 lakh population
- Number of governmental physicians, nurses and midwives per 1,00,000 population

According to the report, Karnataka is one of the front runner Indian state (scoring 66 out of 100), just behind Kerala (92 out of 100) and Tamil Nadu (77 out of 100) on the above mentioned indicators for Goal 3. The national average score for progress on SDG is 52. Although Karnataka has done well in comparison to national average score, there is still a lot more work to do in order to reach the level of comparable states like Kerala and Tamil Nadu.

SECTION 3:
GUIDING PRINCIPLES OF DEVELOPING AND IMPLEMENTING SDG – 3 FOR KARNATAKA

State Matrix for SDG 3 presented in Annexure II provide the list of SDG targets and indicators along with the state level current status as well as the targets to be achieved by the year 2022 and 2030.

Designing and planning desired interventions in Karnataka for achieving targets outlined by SDG - 3 needs to be guided by following principles & objectives:

Guiding Principles:

I. Professionalism, Integrity and Ethics: The proposed interventions need to be of highest professional standards, integrity and ethics to be maintained in the entire system of health care delivery in the state, supported by a credible, transparent & responsible regulatory environment.

II. Equity: Reducing inequity through affirmative action to minimize disparity on account of gender, poverty, caste, disability, other forms of social exclusion and geographical barriers, with greater investments and financial protection for the poor who suffer the largest burden of disease.

III. Accessibility and Affordability: As cost of care increases, accessibility as well as affordability, as distinct from equity, requires emphasis. Household health care expenditures need to be within 10% of its total monthly consumption expenditure or 40% of its monthly non-food consumption expenditure.

IV. Universality: Prevention of exclusions on social, economic or on grounds of current health status is important. In this backdrop, the systems and services need to be designed to cater to the entire population- including special groups to ensure that no one is left behind.

V. Community based, Patient Centered, Comprehensive and Integrated High Quality of Care: Gender sensitive, effective, safe, adequate, appropriate and convenient healthcare services provided using community based approach with dignity and confidentiality to evolve and disseminate standards and guidelines for all levels of facilities and a system to ensure that the quality of healthcare is not compromised.

VI. Accountability: Financial and performance accountability, transparency in decision making, and elimination of corruption in health care systems, both in public and private.

VII. Inclusive Partnerships: A multi stakeholder approach with partnership & participation of all non-health ministries, communities and sectors such as Women and Child Development, ICDS, Water supply and Sanitation, Education. This approach would include partnerships with academic institutions, not for profit agencies, and health care industry as well.

VIII. Pluralism: Patients who so choose and when appropriate, would have access to AYUSH care providers based on documented and validated local, home and community based practices. These systems, inter alia, would also have Government support in research and supervision to develop and enrich their contribution to meeting the national health goals and objectives through integrative practices.

IX. Decentralization: Decentralization of decision making to a level (PRI or Local Self Governance) as is consistent with practical considerations and institutional capacity. Communitization in health planning processes also to be promoted side by side.

X. Dynamism and Adaptability: constantly improving the dynamic organization of health care based on new knowledge and evidence with learning from the communities and from national and international knowledge partners is desired.

Objectives:

Improve health status through concerted action in all sectors and expand preventive, promotive, curative, palliative and rehabilitative services provided through the public health sector with focus on quality.

1. Progressively achieve Universal Health Coverage:

A. Assuring availability of free comprehensive primary health care services, for all aspects of reproductive, maternal, child and adolescent health and for the most prevalent communicable, non-communicable and occupational diseases in the population with optimum use of existing manpower and infrastructure as available in the health sector and advocating collaboration with non – government sector on pro-bono basis for delivery of affordable health care services linked to a health card to enable every family to have access to a medical professional of their choice from amongst those volunteering their services.

B. Ensuring improved access to quality secondary and tertiary care services through a combination of public hospitals and well measured strategic purchasing of services in health care deficit areas, from private care providers, especially the not-for profit providers.

C. Achieving a significant reduction in out of pocket expenditure due to health care costs and achieving reduction in proportion of households experiencing catastrophic health expenditures and consequent impoverishment.

2. Reinforcing trust in Public Health Care System:

Strengthening the trust of the common man and communities in public health care system (both modern and AYUSH) by making it predictable, efficient, community based, patient centric, affordable and effective, with a comprehensive package of services and products that meet immediate health care needs of most people.

3 Align the growth of private health care sector with public health goals:

Influence the operation and growth of the private health care sector and medical technologies to ensure alignment with public health goals, enabling private sector contribution towards making health care systems more effective, efficient, rational, safe, affordable and ethical. Strategic purchasing by the Government to fill critical gaps in public health facilities would create a demand for private health care sector, in alignment with the public health goals.

4 Specific Quantitative Goals and Objectives:

The indicative, quantitative goals, objectives indicators and targets are outlined, aligned to achieve sustainable development in health sector and rigorously monitored in keeping with the guiding principles and policy thrust.

SECTION 4:
KEY TARGETS & INDICATORS OF SDG 3 FOR KARNATAKA

The following section outlines the key health targets to be achieved by Karnataka by 2030. These targets and indicators have been developed based on extensive consultations by expert group and covers public health, communicable diseases, NCDs, road traffic accidents, reproductive health, health care professionals/population ratio and providing 100% essential drugs. The achievement of these targets will require both the modern system of medicine as well as AYUSH systems health care. There are aspirational targets which will require appropriate budgetary allocations by the State Government.

SDG- 3.1 BY 2030, REDUCE THE GLOBAL MATERNITY MORTALITY RATIO TO LESS THAN 70 PER 100 000 LIVE BIRTH

Key Targets for Karnataka

1. To reduce MMR from 108/100,000 live births in 2014 – 2016 to 78/100,000 by 2022 and to 50/100,000 by 2030
2. To increase proportion of births attended by skilled health personnel during last five years from 93.4% in 2015 – 16 to 95% by 2022 and to 100% by 2030
3. To increase the percentage of women aged 15 – 49 years with a live birth (last birth) who received antenatal care four times or more from 70.3% in 2015 – 16 to 80% by 2022 and to 100% by 2030
4. To increase the proportion of institutional deliveries from 94.3% in 2016 – 17 to 100% by 2022 and retain at the same level by 2030
5. To reduce the proportion of home deliveries to nil by 2022 and ensure that any home deliveries if occurringis to be attended by skilled health personnel
6. To maintain the proportion of pregnant women beyond 20 weeks of gestation screened for anemia to 100% by 2022
7. To increase the proportion of pregnant women beyond 28 weeks of gestation screened for gestational hypertension from 4.2% in 2017 – 18 to 100% by 2022 and retain the same level by 2030
8. To increase the proportion of pregnant women beyond 28 weeks of gestation screened for gestational diabetes from 1.2% in 2016 – 17 to 100% by 2022 and retain the same level by 2030
9. To increase the percentage of currently married women aged 15 – 49 years who use any modern method of family planning
10. To reduce percentage of women aged 15 – 19 years who are already mothers or pregnant from 7.8% in 2015 – 16 to 5% by 2022 and < 3% by 2030

SDG - 3.2 BY 2030, END PREVENTABLE DEATHS OF NEWBORNS AND CHILDREN UNDER 5 YEARS OF AGE, WITH ALL COUNTRIES AIMING TO REDUCE NEONATAL MORTALITY TO AT LEAST AS LOW AS 12 PER 1000 LIVE BIRTHS AND UNDER-5 MORTALITY TO AT LEAST AS LOW AS 25 PER 1000 LIVE BIRTHS

Key Targets for Karnataka

1. A 35% reduction in the absolute number of TB deaths and a 20% reduction in the TB incidence rate (new cases per 100 000 population per year) compared with levels in 2015 by 2022
2. A 90% reduction in the absolute number of TB deaths and a 80% reduction in TB incidence (new cases per 100,000 population per year), compared with levels in 2015 by 2030.
3. To combat hepatitis and achieve state wide elimination of Hepatitis C by 2030
4. Achieve significant reduction in the infected population, morbidity and mortality associated with Hepatitis B and C viz. Cirrhosis and Hepato-cellular carcinoma (liver cancer)
5. Reduce the risk, morbidity and mortality due to Hepatitis A and E
6. 75% reduction in new HIV infections by 2030.
7. Complete elimination of mother-to-child transmission of HIV and Syphilis by 2030
8. Elimination of stigma and discrimination
    - Reduce new infections by 80% by 2022 (Baseline 2010)
    - Link 95% of estimated PLHIV to services by 2022

10. Malaria: All Sub- Centers to attain less than 1 API Status by 2020 and to sustain API = 0 level in all villages and no indigenous cases by 2030.

11. Dengue: Maintaining CFR Less Than 1 by 2022 and retain the same level by 2030

12. Leprosy: To reduce proportion of Grade 2 cases amongst new cases of Leprosy to 3% by 2022 and further reduce to 3% by 2030

13. Fluorosis: Reduction in incidence around 12 -15% in endemic districts by 2022 and 30-45% by 2030.

14. Reduction in disease specific incidence of Kyasanur Forest Disease (KFD) by 50% by the year 2022 and complete elimination of KFD (100% reduction in disease specific incidence) by the year 2030.

SDG- 3.3 BY 2030, ENDS THE EPIDEMICS OF AIDS, TUBERCULOSIS, MALARIA AND NEGLECTED TROPICAL DISEASES AND COMBAT HEPATITIS, WATER-BORNE DISEASES AND OTHER COMMUNICABLE DISEASES.

Key Targets for Karnataka

1. Relative reduction in Cardiovascular Disease, Cancer, Chronic Respiratory Diseases and Diabetes by 10% in 2020, 25% by 2025 and 30% by 2030.
2. Halt the rise in obesity and diabetes prevalence
3. Relative reduction in prevalence of raised blood pressure by 10% in 2020, 25% in 2025 and 30% in 2030.
4. Relative reduction in mean population intake of salt by 20% in 2020, 30% in 2025 and 50% by 2030 with the aim of reaching the recommended level of less than 5gm per day
5. Relative reduction in household use of solid fuels as the main source of energy for cooking by 25% in 2020, 50% in 2025 and 70% by 2030
6. To reduce the prevalence of dental caries and periodontal diseases from their current levels to less than 30% by 2030 and maintain the current DMFT levels

Key Targets for Karnataka

1. There is paucity of data on most of the indicators proposed in SDGs under this target. The state will endeavor to generate data on the following indicators and continually improve on yearly statistics:

1. Percentage of adults (15+ years) who have had at least 60 milliliter or more of pure alcohol on at least one occasion weekly (approximately equivalent to standard alcoholic drinks);
2. Number of persons treated in de-addiction centers
3. A relative reduction in alcohol consumption by 5% in 2022 and by 10% by 2025 (National Indicator)
4. Coverage of treatment interventions (pharmacological, psychosocial and AYUSH rehabilitation and aftercare services) for substance use disorders

SDG- 3.6 BY 2020, HALVES THE NUMBER OF GLOBAL DEATHS AND INJURIES FROM ROAD TRAFFIC ACCIDENTS.

Key Targets for Karnataka

1. A reduction in the percentage of deaths due to road traffic accidents from 11133 (2016-17) to 9274 in 2022 and further 9503 in 2030

SDG- 3.7 - BY 2030, ENSURE UNIVERSAL ACCESS TO SEXUAL AND REPRODUCTIVE HEALTH-CARE SERVICES, INCLUDING FOR FAMILY PLANNING, INFORMATION AND EDUCATION, AND THE INTEGRATION OF REPRODUCTIVE HEALTH INTO NATIONAL STRATEGIES AND PROGRAMS

Key Targets for Karnataka

1. Increase the percentage of currently married women (15-49 years) who use any modern family planning methods from 51.30 % (2015-16) to 60% in 2022 and 70% by 2030

2. Reduce the percentage of women aged 15-19 years who are already mothers or pregnant from 7.80% (2015-16) to 5% in 2022 and further reduce it to less than 3% by 2030

3. Increase the percentage of institutional births from 94.3% (2015-16) to 99% in 2022 and 100% by 2030

4. Increase the percentage of eligible population covered by publicly funded health insurance schemes (Rajiv Aarogyarashri, CGHS, ESIS etc.) from 93% (2017) to 100% by 2022

5. Increase the number of hospital beds (In Govt. Hospitals) from 9 beds per 10000 population (2017) to 15 per 10000 in 2022 and 30 per 10000 per by 2030

SDG – KARNATAKA

SDG- 3.8 - ACHIEVE UNIVERSAL HEALTH COVERAGE, INCLUDING FINANCIAL RISK PROTECTION, ACCESS TO QUALITY ESSENTIAL HEALTH-CARE SERVICES AND ACCESS TO SAFE, EFFECTIVE, QUALITY AND AFFORDABLE ESSENTIAL MEDICINES AND VACCINES FOR ALL

Key Targets for Karnataka

1. Ensure continued and equitable access to disease prevention, promotion, treatment and rehabilitation throughout all stages of life.

2.To increase the percentage of TB cases successfully treated (cured plus treatment completed) among TB cases notified to the national health authorities during a specified period from 85% (2016) to 90% in 2022 to 95% by 2030.

3. To increase the percentage of people living with HIV currently receiving ART among the detected number of adults and children living with HIV to 100% by 2022

4. To increase the proportion of women aged 30-49 years who report they were ever screened for cervical cancer and the proportion of women aged 30-49 years who report theywere screened for cervical cancer during the last 5 years from 15.6% in (2015-16) to 50.00% by 2022 and 70.00% by 2030

5. To increase the total Physicians, nurses and Midwife: 2 doctors per 1000 population10 staff Nurse per 1000 population2 midwives per 1000 population by 2022 and 5 doctors per 1000 population12 staff nurse per 1000 population2 5 midwives per 1000 population by 2030

6. To provide 100% essential drugs recommended by the World Health Organization Essential Drugs List by 2022

SDG 3.9- BY 2030, SUBSTANTIALLY REDUCE THE NUMBER OF DEATHS AND ILLNESSES FROM HAZARDOUS CHEMICALS AND AIR, WATER AND SOIL POLLUTION AND CONTAMINATION

Key Targets for Karnataka

1. This is a national target and the specific indicators for Karnataka State is in line with the National indicators which are:

1. Incidence of Deaths due to unintentional poisoning
2. Proportion of men and women (15-49 years) reporting Asthma

SDG- 3. A STRENGTHEN THE IMPLEMENTATION OF THE WORLD HEALTH ORGANIZATION FRAMEWORK CONVENTION ON TOBACCO CONTROL IN ALL COUNTRIES, AS APPROPRIATE

Key Targets for Karnataka

1. This is a national target and the specific indicator for Karnataka State is in line with the National indicator which is:

2. Reducing the age-standardized prevalence of current tobacco use among persons aged 15 years and older from its current levels to 15% by 2022 and further to 30% by 2030.

SDG – KARNATAKA

SDG- 3.B SUPPORT THE RESEARCH AND DEVELOPMENT OF VACCINES AND MEDICINES FOR THE COMMUNICABLE AND NON-COMMUNICABLE DISEASES THAT PRIMARILY AFFECT DEVELOPING COUNTRIES, PROVIDE ACCESS TO AFFORDABLE ESSENTIAL MEDICINES AND VACCINES,

Specific Indicators for Karnataka

This is an aspirational target and the proposed specific aspirational indicators for Karnataka State are:

1. % of state health budget allocated to bio-medical & AYUSH research
2. % of state health budget allocated to basic health sectors & validation of AYUSH
3. % of state health budget allocated to strengthening practice, professional education and overall development of AYUSH systems of medicine
4. Budget expenditure on health as a % of State GDP (as per National Health Policy 2017 and Karnataka State Health Policy)
5. Reduction in Out Of Pocket Expenditure on Health as per the advised National norms.

1. To increa
100% by 202

SDG- 3.C SUBSTANTIALLY INCREASE HEALTH FINANCING AND THE RECRUITMENT, DEVELOPMENT, TRAINING AND RETENTION OF THE HEALTH WORKFORCE IN DEVELOPING COUNTRIES, ESPECIALLY IN LEAST DEVELOPED COUNTRIES AND SMALL ISLAND DEVELOPING STATES

Specific Indicators for Karnataka

This is an aspirational target and the proposed specific aspirational indicators for Karnataka State are:

1. Total physicians, AYUSH specialists, nurses and midwives per 10000 population in 2022 and 2030 as per National / WHO norms.
2. Percentage of public investment in health as proportion of GDP as per national norms.

SDG- 3.D - STRENGTHEN THE CAPACITY OF ALL COUNTRIES, IN PARTICULAR DEVELOPING COUNTRIES, FOR EARLY WARNING, RISK REDUCTION AND MANAGEMENT OF NATIONAL AND GLOBAL HEALTH RISKS

The achievements of these targets will require a relevant, integrated Health Management Information System which should be designed for the health and associated departments so that such an array of targets can be monitored.

SECTION 5:
KEY RECOMMENDATIONS

TARGETS 3.1 3.2 AND 3.7

Target 3.1By 2030, reduce the global maternal mortality ratio to less than 70 per 100 000 live births

Target 3.2 By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to a least as low as 12 per 1000 live births and under-5 mortality to at least as low as 25 per 1000 live births

AND

Target 3.7 by 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programs

Key Recommendations:

1.Rapid situation analysis: should be done to assess the public health infrastructure (physical, human resource, drugs and diagnostics, instruments and equipments, governance, decision making processes and leadership) at all the administrative levels; state, district, sub – district and at village level; compare the same with IPHA Standards and promptly bridge the gaps if any.

2. It is important to carry out a Bottleneck analysis of planning and implementation processes at various levels; including the state and district level in order to prioritize attention to address specific gaps in the delivery of a particular intervention or a set of interventions.

3. Implement an integrated, comprehensive package of evidence based interventions which is outlined in the tables below and which includes those interventions that are shown to have high impact on reducing mortality of mothers and children and improving their survival, with the effectiveness of these interventions determined by the coverage achieved among the affected groups of population and also the availability, accessibility, actual utilization and quality of services delivered.

4. Coordinated, holistic implementation of different national health programs in the field of MCH, FP, Nutrition, RCH and Adolescent Health ensuring partnerships with all stakeholders at national, state, research organization and Non Government Organization level to deliver at scale and achieve their objectives using the proposed approaches and strategies with a focus on community based epidemiological approach to manage the program implementation.

5. It is important to intensify the focus on first 1000 days (pregnancy and first two years of the child's life). It is therefore necessary to implement Nutrition-related interventions given in pre –

natal, ante natal care guidelines through monthly outreach and periodic facility-based antenatal contact points to improve maternal nutrition and reduce Low Birth Weight.

6. For children less than 6 months of age, falling in the category of moderate or severe acute malnutrition intensify community based management of acute malnutrition (CMAM) with screening, treatment of illness, establishing, or re-establishing, effective exclusive breastfeeding, ccompletion of preventive interventions such as Mother Child Protection (MCP) card; optimal complementary feeding starting at 6 months, with effective messaging and counselling on frequency and dietary diversity. POSHAN Abhiyan has the resources, programmes and commitment that focuses on Coverage, Continuity, Intensity and Quality (C^2IQ).

7. Document the life course or life cycle based, life stage specific age appropriate critical best practices across interventions and target populations

8. Rigorously implement "Vision 2020" Plan towards achieving universal registration of births and deaths and even marriages by 2020.Strengthen and Transform Civil Registration and Vital Statistics (CRVS) systems, use the decentralized, disaggregated data to achieve universal health coverage as well as strategize the programs for women and children.

9. Streamline existing national / state / district level health and nutrition surveys in a way that will improve disaggregated tracking of goals and objectives and use the results for monitoring, evaluation and decision making for improvement.

10. A state Forum on Health and Nutrition Statistics should be set up to improve the quality, availability, and timeliness of data necessary to track national as well as state level health goals.

Integrated Package of Continuum of Care across life cycle and different levels of health system

Reproductive care		**Pregnancy and child birth care**	**Newborn and childcare**
Clinical	• Comprehensive abortion care • RTI/STI case management, • Postpartum IUCD and	• Skilled obstetric care and immediate newborn care and resuscitation • Emergency obstetric care	• Essential newborn care • Care of sick newborn (SNCU, NBSU) • Facility-based care of childhood illnesses (IMNCI) • Care of children with severe

	sterilization; interval IUCD procedures • Adolescent friendly health services	• Preventing Parent to Child Transmission (PPTCT) of HIV • Postpartum sterilization	acute malnutrition (NRC) • Immunization	
Outreach and Sub centre	• Family planning (including IUCD insertion, OCP and condoms) • Prevention and management of STIs • Peri-conception Folic acid supplementation	• Full antenatal care package • PPTCT	• Early detection and management of illnesses in mother and newborn • Immunization	• First level assessment and care for newborn and childhood illnesses • Immunization • Micro-nutrient supplementation
Family and Community	• Weekly IFA supplementation • Information and counseling on sexual reproductive health and family planning • Community based promotion and delivery of contraceptives • Menstrual hygiene	• Counselling and preparation for newborn care,breast feeding, birth preparedness • Demand generation for pregnancy care and institutional delivery (JSY, JSSK)	• Home-based newborn care and prompt referral (HBNC scheme) • Antibiotic for suspected case of newborn sepsis • Infant and Young Child Feeding (IYCF), including exclusive breast feeding and complementary feeding, • Child health screening and early intervention services (0–18 years) • Early childhood development	

• Danger sign recognition and care-seeking for illness

• Use of ORS and Zinc in case of diarrhea

Intersectoral: Water, sanitation, hygiene, nutrition, education, empowerment

Adolescence/ Pre-pregnancy	Newborn / postnatal	Newborn / postnatal	Newborn / postnatal	Childhood

PRIORITY INTERVENTIONS FOR ADOLESCENTS

1. Adolescent nutrition; iron and folic acid supplementation
2. Facility-based adolescent reproductive and sexual health services (Adolescent health clinics)
3. Information and counseling on adolescent sexual reproductive health and other health issues
4. Menstrual hygiene
5. Preventive health checkups

Examples of evidence-based summary interventions for women, children and adolescent health

Life Course	Intervention Packages	Enabling Environment
Women's Health	• Sexual and reproductive health information and services; • Nutrition; • Management of communicable and non communicable diseases;	**Health Enablers** • policies for universal health coverage; sufficient and sustainable financing; • health workforce supported to provide good-quality care everywhere; • commodity supply;

	• Screening and management of cervical and breast cancer; • Gender based violence prevention and response; • Pre-pregnancy risk detection and Management	• health facility infrastructure; • community engagement; • mainstreaming emergency preparedness; • human rights, equity-and gender based approaches in programming; • accountability at all levels
Pregnancy, childbirth and postnatal care	• Antenatal care, • Childbirth care; • Safe abortion and post-abortion care; • Prevention of mother-to-child transmission of HIV; • Management of maternal and newborn complications; • Postnatal care for mother and baby; • Extra care for small and sick newborns and babies	
Child health and development	• Breastfeeding; • Infant and young child feeding; • Responsive care giving and verbal stimulation; • Immunization; • Prevention and management of childhood illness and malnutrition; • Treatment and rehabilitation of congenital abnormalities and	**Multisector Enablers** • Policies and interventions in key sectors: finance and social protection; • Education; • Gender; • Protection – registration, law and justice; water and sanitation; • Agriculture and nutrition;

	disabilities	• Environment and energy;
Adolescent health and development	• Health education; • Supportive parenting; • Nutrition; • Immunization; • Psychosocial support; • Prevention of injuries, violence, harmful practices and substance abuse; • Sexual and reproductive health information and services; • Management of communicable and non-communicable diseases	• Labor and trade; • infrastructure, including facilities and roads; • Information and communication technologies; • Transport

TARGET 3.3

Target 3.3 by 2030; end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases

HIV-AIDS

1. Targeted Interventions (TIs) need to focus on accelerating HIV prevention in 'at risk group'

2. Ensure universal access to comprehensive HIV care that should include expanding quality assured HIV testing with counseling; free treatment scale up including second and third line treatment for every case without any stigma and discrimination.

3. Strive for ARV treatment adherence and prevent any loss to treatment follow up to ensure that 95-95-95: 95% of those who are HIV positive know their status, 95% of those who know their status are on treatment and 95% of those who are on treatment experience effective viral load suppression,

4. Rigorously implement Prevention of Parent to Child Transmission (PPTCT) of HIV.

5. Restructuring the strategic information system to be efficient and patient-centric and useful for cohort tracking of individual cases

6. Intensive Information Education and Behavior Change Communication (IEC and BCC) services to be provided on a priority basis.

7. Vulnerability Reduction interventions such as social protection, financial security and addressing violence to be provided concurrently with the risk reduction interventions to accelerate the achievement of outcomes.

8. Greater focus on prevention especially in low HIV prevalence settings including effective IEC / BCC, universal safe sex practices (use of condom, limiting number of sexual partners), high coverage of HIV testing and ART, positive prevention, scaled up adherence to ART, preventing loss to follow up, post exposure prophylaxis, pre exposure prophylaxis Blood Safety measures.

9. Institutional (community led organizations) capacity building.

10. Management of co morbidities.

TUBERCULOSIS:

1. The TB milestones can only be achieved if TB diagnosis, treatment and prevention services are provided within the context of progress towards universal health coverage (UHC), and if there is multisectoral action to address the social and economic factors that drive TB epidemics.

Detect: People with drug sensitive TB as well as those with drug resistant TB. The emphasis is to be on reaching TB patients seeking care from private providers and also finding people with undiagnosed TB in "high risk" or key populations. This is to be done through:

(a) Scaling up free, high sensitive TB diagnostic tests such as CB – NAAT (Cartridge Based Nucleic Acid Amplification Test)

(b) Scaling up private provider engagement approaches

(c) Universal testing for drug resistant TB and

(d) Systematic screening of high risk population to detect latent infections

Diagnose: The Technical & Operational Guidelines for TB Control (TOG) which describes how various tests should be used to diagnose anyone who has signs and symptoms suggesting that they might have TB should be used for diagnosis of Tuberculosis including the MDR cases.

Treat: Initiate and sustain all patients on appropriate anti – TB treatment wherever they seek care. Provide patient friendly systems and social support through:

(a) Preventing the loss of TB cases in the cascade of care by providing support systems. The cascade of care means every step in the provision of treatment, from when it is first started, to the point at which the patient finishes the treatment and is cured of TB.

(b) Providing free TB drugs for all patients with TB

(c) Provide TB drugs as per the National programme for all patients with TB and a rapid scale up of short course regimens for drug resistant TB. Provide treatment approaches guided by drug sensitivity testing

(d) Providing patient friendly adherence monitoring and social support in order to sustain TB treatment.

(e) The elimination of catastrophic costs by linking eligible TB patients with social welfare schemes including nutritional support is to be ensured.

2. Nutritional Support: Provide financial assistance for nutritional support for patients with TB

3. Prevent: The main health-care interventions to prevent new infections of *Mycobacterium tuberculosis* and their progression to TB disease are treatment of latent TB infection and vaccination of children with the BCG vaccine. TB preventive treatment for a latent TB infection is expanding, but most of those for whom it is strongly recommended are not yet accessing care, whereas coverage of BCG vaccination is high. WHO has strongly recommended treatment for latent TB infection in two priority groups: people living with HIV, and children aged less than 5 years who are household contacts of someone who has bacteriological confirmed pulmonary TB.

4. Build: Strengthen relevant policies and provide extra capacity for institutions and extra human resources capacity. This is to be done through

(a) Translating high level political commitment into action

(b) Restructuring the RNTCP and other institutional arrangements

(c) Building supportive structures for surveillance, research and innovations

(d) Scaling up technical assistance at national and state levels and

(e) Preventing the duplication of partners' activities.

5. Private provider engagement: The new strategy for reaching patients in the private sector is going to be systematic and large scale, rather than ad hoc and insignificant. Rather than the public sector competing with private providers the RNTCP will work with them to deliver quality STCI services to the entire population. Private providers will be given the financial incentives.

MALARIA

1. Categorize the endemic / affected districts into one of the four categories; category 0, 1, 2 or 3 on the basis of Annual Parasitic Index (API) of less than 1 case per 1000 population at risk, for phasing the interventions.

2. District to be the unit of planning and implementation, focus on high transmission areas and use of Special strategy for P. vivax elimination

3. Framework on Malaria Elimination in India 2016–2030has to be translated into a national plan of action by establishing category specific interventions.

a. Intensified Control Phase (Category 3 districts): Implement intensified Control activities

b. Pre – Elimination Phase (Category 2 districts): Implement Elimination phase activities with establishing a surveillance system

c. Elimination Phase (Category 1 districts): Implement Elimination phase activities

d. Prevention of Re-establishment Phase (Category 0 districts): Prevent re-introduction and possible re-establishment of malaria transmission; and Maintain malaria-free status in these areas.

4. Tribal Malaria Action Plan (TMAP) for intensification of malaria prevention and control activities in tribal and ethnic population groups spread across different states/UTs.

5. Revised IEC/BCC strategy should be implemented with special emphasis on malaria elimination

6. Use Innovation in Vector control, addressing malaria in outbreak, and for service delivery

7. Special attention should be given to capacity building of different functionaries

8. Carry out Research studies in the areas of community behavior; longitudinal surveys on malaria vector population dynamics, drug resistance monitoring, therapeutic efficacy studies and Cost-benefit analysis of interventions used for malaria elimination

9. Implementation of the National Framework for Malaria Elimination in India (2016–2030) should be evaluated at regular intervals for compliance with milestones, targets and objectives to be achieved. Parameters to be established to monitor and evaluate all program areas, with a particular focus on monitoring the operational aspects of the program such as: coverage and quality of interventions; measuring operational and epidemiological indicators to ensure that program activities are yielding desired results in achieving milestones, targets and objectives; documenting progress towards malaria elimination; and advising on revisions in policies and strategies when needed.

10. A minimal set of key indicators should be used to measure the state's progress towards elimination of malaria at district and sub-district levels.

HEPATITIS

1. Preventive component: Promote and implement interventions such as

(a) Generate awareness through IEC / BCC;

(b). Provide Hepatitis B vaccination to newborns, members of high risk groups, and health care workers;

(c). Ensure Safety of blood and blood products

(d). Injection safety, safe socio-cultural practices

(e). Provide safe drinking water, hygiene and sanitary toilets.

2. Diagnosis and Treatment: Focus should be on

(a.) Screening of pregnant women for HBsAg to be done in areas where institutional deliveries are < 80% to ensure their referral for institutional delivery for at birth dose of Hepatitis B vaccination.

(b) Make available free screening, diagnosis and treatment for both hepatitis B and C at all levels of health care in a phased manner.

(c) provide linkages, including with private sector and not for profit institutions, for diagnosis and treatment.

(d) Engagement with community / peer support to enhance and ensure adherence to treatment and demand generation.

3. Monitoring and Evaluation, Surveillance and Research: Establish effective linkages with the surveillance system and promote operational research through Department of Health Research

(DHR). Develop a standardized M&E framework and set up an online web based data management system.

4. Training and capacity Building: It should be a continuous process; supported by NCDC, ILBS & state tertiary care institutes & coordinated by NVHCP. The hepatitis induction & update programs for all level of health care workers would be made available using both, the traditional cascade model of training through master trainers and various platforms available for enabling electronic, e-learning and e-courses.

5. Integrated Disease Surveillance Program: The National Viral Hepatitis Management Unit and State Viral Hepatitis Management Unit need to collaborate with the Integrated Disease Surveillance Program.

6. National program for Surveillance of Viral Hepatitis: The NVHCP should undertake surveillance of acute, chronic hepatitis as well as their sequel .It should also have estimates for the disease burden for Hepatitis B and C in the state.

7. Swachh Bharat Mission- Urban & Rural: NVHMU and SVHMU should establish linkages with Swachh Bharat Mission through meetings and consultations with the officials of Ministry of Housing and Urban Affairs at the national and state level so as to achieve the objectives of the mission and indirectly help reduce the burden of hepatitis A and E. NVHMU and SVHMU will also work towards ensuring training of each facility towards cleanliness and environmental hygiene. The Swachh Bharat Mission in rural areas implemented through Ministry of Drinking Water and Sanitation should also be involved in a similar manner.

NEGLECTED TROPICAL DISEASES

1. Soil Transmitted Helminthes: Use the major strategy to control soil transmitted helminthes that relies on once or twice yearly mass drug administration (MDA) using the single drug mebendazole or albendazole as a single dose or in combination with DEC, with a drug delivery system relying heavily on schools and schoolteachers administering the drugs.

2. Lymphatic Filariasis: Focus should be on two main strategies which are: **(1)** annual MDA with two drugs, DEC and albendazole, to the entire eligible population for 5–6 years, and **(2)** home-based disability alleviation and prevention.

3. Trachoma: Follow the SAFE strategy (Surgery, Antibiotics, Facial cleanliness and Environmental improvement) to reduce transmission. Trachoma control efforts have increased

with mass drug administration (MDA) of azithromycin (zithromax). The goal is 80% coverage in endemic areas for at least three years.

5. Leptospirosis: Prevention through Health Education should be the core approach.

(a) Alert public or users regarding the hazards of possible contaminated areas. Advise public to keep their homes and premises free from rodents.

(b) Advise people to vaccinate their pets against leptospirosis.

(c) Promote cleanliness at the recreational areas, food premises as well as housing area.

(d) Persons with occupational or recreational exposure to potentially contaminated water or soil should:- Wear waterproof protective clothing such as rubber boots and gloves; cover skin lesions with waterproof dressings; wash with clean water immediately after exposure;

(e) Seek immediate medical treatment if symptoms develop within the incubation period.

(f) Advise public to keep their homes and premises free from rodents

6. Visceral Leishmaniasis (kala – azar): The major elements of the prevention and control strategy include:

(a) Early diagnosis wherever possible, with the rapid diagnostic test rk-39 and prompt treatment with the oral drug miltefosine, injectable paromomycin, or liposomal amphotericin

(b) Integrated vector management, which includes bed nets and indoor residual spraying with DDT and other agents

(c) Effective disease surveillance;

(d) Social mobilization and partnerships; and

(e) Clinical and operational research among the challenges to VL elimination in South Asia are the high rates of PKDL (post kala – azar dermal leishmaniasis). These patients represent a potent source for Leishmania parasites and require a prolonged treatment period. Several vaccines to prevent VL are also under development.

7. Amoebiasis: Amoebic dysentery is a food and waterborne disease. Effective prevention and control rely on

(a) Maintaining good environmental sanitation, especially in controlling quality of drinking water;

(b) prompt investigation of cases and implementation of control measures to prevent spread of the disease;

(c) Health education to the general public and food trade on observance of good personal, environmental and food hygiene.

(d) The drinking water quality is closely monitored by comprehensive monitoring and regular sampling from the entire water supply system for laboratory testing to ensure safe water supplies. Extensive water samples are collected throughout the water supply system for physical, chemical, bacteriological, biological, radiological and trace substances analysis.

(e) Disease surveillance and public health response.

(f) Disease Surveillance and containment

(g) Health education of patients, their family members, close associates and food handlers about good personal, food and environmental hygiene including hand washing.

(h) Infected food handlers to be suspended from food-handling work for at least three months after completion of treatment with antibiotics.

8. Leprosy:

(a) Sustained political commitment and ensuring adequate resources

(b) Integration of leprosy services into the general health system through capacity building and skill development,

(c) Ensuring a wider coverage of leprosy services, especially in currently under-served population groups such as remote rural areas, urban slums, and migrant labor

(d) Ensuring a wider coverage of leprosy services, especially in currently under-served population groups such as remote rural areas, urban slums, and migrant labor

(e) Prevention of and the care of disabilities and displacement of leprosy-affected individuals and ensuring community-based rehabilitation of cured/disabled leprosy persons; and

(f) Streamlining the MDT supply and stock management at all levels, especially in areas of low endemicity.

9. Dengue: Key Steps for Prevention:

(a) Diagnosis and case management

(b) Integrated surveillance and outbreak preparedness

(c) Sustainable vector control

(d) Future vaccine implementation

(e) Operational and implementation research.

10. Japanese Encephalitis (JE)

Important interventions which are to be prioritized for prevention and control of Japanese Encephalitis are immunization against Japanese Encephalitis which is recently introduced by Government of India in a phased manner in National immunization schedule; epidemiological surveillance and containment and integrated vector control and IEC / BCC to promote personal protection from mosquito bites.

11. Chikungunya: Although the disease is self-limiting, morbidity can be very high in major outbreaks resulting in a heavy social and economic toll. The disease being preventable it requires a planned approach, besides knowledge and awareness of early warning signs, for prevention. Integrated vector management through the elimination of breeding sites, use of anti-adult and anti-larval measures and personal protection will contribute to preventing an outbreak. Community empowerment and mobilization is crucial for prevention and control of chikungunya. Adult mosquito control measures such as fogging often applied by the civic authorities as a single tool may not by itself contribute to the effective containment of an outbreak.

12. Rabies: Key methods of prevention of rabies include prompt medical attention comprised of wound cleaning and care and post-exposure prophylaxis with rabies vaccine.

KYASANUR FOREST DISEASE (KFD)

1. Set up a Stage IV bio safety level lab at Shimoga for testing KFD
2. Strengthen surveillance at district level for KFD
3. Create requisite posts for having sufficient trained human resources in endemic areas.
4. Have interstate cooperation for testing human and animal samples and for collaboratively combating KFD.

FLUOROSIS

1. People should be prevented from drinking non-potable water through better inter-sector coordination
2. Fluoride testing of serum should be encouraged in endemic districts
3. Explore ways to defluoridate existing water sources.
4. Emphasis on nutritional diet advice in endemic fluoride rich areas.

5. Better coordination with existing water and sanitation schemes like Jaladhara.

TARGET 3.4

Target 3.4By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being

The main focus of the action plan is on four types of non-communicable disease – cardiovascular diseases, cancer, chronic respiratory diseases and diabetes – which make the largest contribution to morbidity and mortality due to non-communicable diseases, and on four shared behavioral risk factors – tobacco use, unhealthy diet, physical inactivity and harmful use of alcohol.

The state action plan proposes the following six interconnected and mutually reinforcing approaches:

(i) Multi-sector cooperation and advocacy;

(ii) Multi - sector response;

(iii) Addressing risk factors and determinants

(iv) Health Systems Strengthening and Universal Health Coverage;

(v) Research, development and innovation

(vi) Surveillance and monitoring.

Key Recommendations for reducing the burden of Non-Communicable Diseases in Karnataka:

1. To raise the priority accorded to the prevention and control of non-communicable diseases in state agenda by taking into cognizance the Karnataka Jana Aayoga recommendation on NCD integration into Primary Health Care.

2. To strengthen state capacity; leadership, governance, multisectoral action and partnerships to accelerate state response for the prevention and control of non-communicable diseases.

3. To reduce modifiable risk factors for non-communicable diseases especially

(a) Tobacco consumption;

(b) Promoting a healthy diet;

(c) Promoting physical activity:

(d) Reducing the harmful use of alcohol and underlying social determinants through creation of health-promoting environments.

4: To strengthen and orient health systems to address the prevention and control of non-communicable diseases and the underlying social determinants through people-centered primary health care and universal health coverage.

5. To promote and support state capacity for high-quality research and development for the prevention and control of non-communicable diseases.

6: To monitor the trends and determinants of non-communicable diseases and evaluate progress in their prevention and control.

7. Implement the WHO "best buys" – (very cost-effective interventions that are also high-impact and feasible for implementation even in resource-constrained settings) related to the modifiable risk factors.

TOBACCO

- Reduce affordability of tobacco products by increasing tobacco excise taxes;
- Create by law completely smoke-free environments in all indoor workplaces, public places and public transport;
- Warn people of the dangers of tobacco and tobacco smoke through effective health warnings and mass media campaigns.
- Ban all forms of tobacco advertising, promotion and sponsorship

HARMFUL USE OF ALCOHOL

- Regulate commercial and public availability of alcohol
- Restrict or ban alcohol advertising and promotions
- Use pricing policies such as excise tax increases on alcoholic beverages

DIET AND PHYSICAL ACTIVITY

- Reduce salt intake;
- Replace Trans fats with unsaturated fats;
- Implement public awareness programs on diet and physical activity
- Promote and protect breastfeeding.

CARDIOVASCULAR DISEASE AND DIABETES

■Drug therapy (including glycemic control for diabetes mellitus and control of hypertension using a total risk approach and counseling to individuals who have had a heart attack or stroke and to persons with high risk (≥ 30%) of a fatal and nonfatal cardiovascular event in the next 10 years

■Acetylsalicylic acid (aspirin) for acute myocardial infarction

CANCER

■Prevention of liver cancer through hepatitis B immunization

■Prevention of cervical cancer through screening (visual inspection with acetic acid [VIA] linked with timely treatment of pre-cancerous lesions)

HEALTHY AGEING & GERIATRIC CARE

1. Ensure continued and equitable access to disease prevention, promotion, treatment and rehabilitation especially to the elderly.
2. Develop robust, integrated systems of health and long term care oriented around maximizing function in old age with a special focus on Alzheimer's disease, Dialysis and Dementia.
3. Making available, medicines and assistive technologies that supports the maintenance of functional ability where necessary.
4. Support and strengthen old age care homes.

TARGET 3.5

Target 3.5 Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol

Proposed policy options are intended to advance the adoption and implementation of the global strategy to mobilize political will and financial resources for that purpose in order to contribute to achieving the voluntary global targets listed below:

- **Multisectoral State Policies**

  Develop and implement, as appropriate, comprehensive and multisectoral national policies and programs to reduce the harmful use of alcohol as outlined in the global

strategy, addressing the general levels, patterns and contexts of alcohol consumption and the wider social determinants of health in a population

- **Public Health Policies**

  Formulate public health policies and interventions based on clear public health goals, existing best practices, best-available knowledge and evidence of effectiveness and cost-effectiveness generated in different contexts.

- **Leadership**

  Strengthen capacity and empower health department to assume a crucial role in bringing together other ministries and stakeholders as appropriate for effective public policy development and implementation and at the same time protecting those policies from undue influence of commercial and other vested interests.

- **Capacity**

  Increase the capacity of health care services to deliver prevention and treatment interventions for alcohol abuse, including screening and brief interventions in all settings providing treatment and care for non-communicable diseases.

- **Monitoring**

  Develop effective frameworks for monitoring the harmful effects of alcohol use, as appropriate to national context, based on a set of indicators included in the comprehensive global monitoring framework for non-communicable diseases.

TARGET 3.6

Target 3.6 Halve the number of global deaths and injuries from road traffic accidents

It is suggested that the following good transport and land-use policies offer a means of reducing the exposure to risk for road crash injury. Safety-conscious planning and design of the road network can minimize the risk of crashes and crash injury. Crash-protective features on a vehicle can save lives and reduce injuries for road users, both inside and outside the vehicle. Compliance with key road safety rules can be significantly enhanced using a combination of legislation, enforcement of the law, and information and education. The availability of good quality emergency care can save lives, and greatly reduce the severity and long-term consequences of road injuries.

1. Reducing motor vehicle traffic and efficient land use: Safety impact assessments of transport and land-use plans; Providing shorter, safer routes and trip reduction measures; Encouraging use of safer modes of travel; Minimizing exposure to high-risk scenarios; Restricting access to different parts of the road network; Giving priority in the road network to higher occupancy vehicles; Restrictions on speed and engine performance of motorized two-wheelers; Increasing the legal age for use of motorized two-wheelers; Graduated driver licensing systems.

2. Shaping the road network for road injury prevention: Safety-awareness in planning road networks; Incorporating safety features into road design; Higher-speed roads; Single-lane carriageways; Residential access roads; Safer routes for pedestrians and cyclists; Traffic-calming measures

Safety audits; Crash-protective roadsides; Crash cushions; Remedial action at high-risk crash sites;

3. Providing visible, crash-protective, "smart" vehicles: Improving visibility of vehicles; Daytime running lights for motorized two wheeler and cars; High-mounted stop lamps in cars; Improving the visibility of non-motorized vehicles; Crash-protective vehicle design; Safer car fronts to protect pedestrians and cyclists; Safer bus and truck fronts; Car occupant protection; Frontal and side impact protection; Occupant restraints; Protection against roadside objects; Vehicle-to-vehicle compatibility; Front, rear and side under-run guards on trucks; Design of non-motorized vehicles; "Intelligent" vehicles; "Smart", audible seat-belt reminders; Speed adaptation; Alcohol interlocks; On-board electronic stability programs

4. Setting and securing compliance with key road safety rules: Setting and enforcing speed limits; Speed enforcement on rural roads; Speed cameras; Speed limiters in heavy goods and public transport vehicles; Setting and enforcing alcohol impairment laws; Blood alcohol concentration limits for the general driving population; Deterring excess alcohol offenders; Random breath testing and sobriety checkpoints; Mass media campaigns; Penalties for excess alcohol offenders; Interventions for high-risk offenders; Medicinal and recreational drugs; Regulated drivers' hours of work in commercial and public transport; and cameras at traffic lights

5. Setting and enforcing seat-belt and child restraint use: Enforcement and publicity; Incentive programs; Child restraints; Mandatory child restraint laws;

6. Setting and enforcing mandatory crash helmet use: Bicycle helmets; Motorcycle helmets; Mandatory laws on helmet wearing; the role of education, information and publicity;

7. Delivering post-crash care: Chain of help for patients injured in road crashes; Pre-hospital care; Role of lay bystanders; Access to the emergency medical system; Emergency rescue services; The hospital or trauma care setting; Human resources; Physical resources; Organization of trauma care; Rehabilitation;

8. Research: Encouraging research on road safety measures.

TARGET 3.8

Target 3.8 Achieve universal health coverage; including financial risk protection, access to quality essential health-care services and to safe, effective, quality and affordable essential medicines and vaccines for all.

State should endeavor to promote state and central financial protection schemes for ensuring that accessible and affordable preventive, promotive, rehabilitative and clinical health services are available for all residents of Karnataka in a way that it does not cause any financial hardship on the user. The state should effectively use Indian system of medicine (AYUSH), very often there are cost effective cures under AYUSH for many widely prevalent local diseases. The AYUSH system also requires innovative inputs and generation of novel, curative and innovative measures to bring about UHC for all. Besides this the government should also undertake the following:

1. Activate VHSNCs, MASs and RKs
2. Enable Hand-holding and follow-up support for VHSNCs, MASs, RKSs
3. Develop platforms for dialogue and exchange between local people and health authorities
4. Ensure that the requisite number of ANMS and ASHAs are recruited
5. Upgrade and strengthen basic infrastructure in Sub-Centers, PHCs and District Hospitals
6. Ensure full stock of essential medicines
7. Ensure basic screening and diagnostic services
8. Ensure that occupational health services are available

9. Provide access to information and entitlements at local level
10. Address Social Determinants of Health like water and sanitation, nutrition through proper functioning of PDS and Early Childhood among others
11. Expand and enable use of IT
12. Encourage community action for health
13. Ratio of capital to revenue expenditure needs to be relooked. There is a need to maintain the existing infrastructure more than laying emphasis on creating newer ones. Maintenance of existing equipment and machinery to be given priority.

TARGET 3.A

Target 3.a Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control

TOBACCO CONTROL

1. Aim at achieving the voluntary global target of a 30% relative reduction in prevalence of current tobacco use in persons aged 15 or older.
2. Accelerate full implementation of the WHO Framework Convention on Tobacco Control (FCTC). Implement the following measures as part of a comprehensive multisectoral package:

A. Protect tobacco control policies from commercial and other vested interests of the tobacco industry in accordance with national law,

B. Legislate for 100% tobacco smoke-free environments in all indoor workplaces, public transport, indoor public places and, as appropriate, other public places,

C. Implement comprehensive bans on tobacco advertising, promotion and sponsorship,

D. Reduce affordability of all tobacco products by increasing tobacco excise taxes to reduce tobacco consumption

E. Warn people of the dangers of tobacco and tobacco smoke through effective health warnings and mass media campaigns

F. Offer help to people who want to stop using tobacco, or reduce their exposure to environmental tobacco smoke, especially pregnant women,

G. Regulate the contents and emissions of tobacco products and require manufacturers and importers of tobacco products to disclose to governmental authorities information about the contents and emissions of tobacco products,

H. Monitor tobacco use, particularly including initiation by and current tobacco use among youth, in line with the indicators of the global monitoring framework, and monitor the implementation of tobacco control policies and measures

I. Establish or reinforce and finance a national coordinating mechanism or focal points for tobacco control,

J. Establish or reinforce and finance mechanisms to enforce the adopted tobacco control policies,

TARGET 3.B, 3.C AND 3.D

Target 3.B, 3.C and 3.D specific policy research and system recommendations are discussed under targets 3.1 to 3.8.

Concluding Remarks:

This report is a product of extensive work done by experts in diverse disciplines drawn from across Karnataka and nationally. The recommendations, when implemented, will enable Karnataka to achieve the SDG in Health Care and move to the top position in SDG implementation matrix among India's states. The implementation of these targets will require sensitization of health workforce (both modern system of medicine and AYUSH) up to the grass root level who would be implementing these recommendations; secondly the message of SDGs will have to be taken up to the district level so that equity in achievement of SDGs is achieved throughout the state and thirdly, there is a need to constantly evaluate the programmes in health and development along with periodic financial assessments so that the SDG 3 targets are achieved without causing any financial burden and Karnataka takes affirmed and assured steps in realizing health and well-being for all.

ANNEXURE 1

Summary of SDG meetings-

SDG meeting committee was formed with a group of experts from diverse fields. It included representatives from Planning department, Home department, Health department, AYUSH, Statistics Department, Social Welfare department, besides experts in the field of Public health, Paediatrics and other relevant fields.

SDG – KARNATAKA

First meeting of SDG committee was held on 28th March 2018 under the chairmanship of Dr Alexander Thomas. This meeting was convened to finalize the indicators listed under goal 3 of SDG. A sub indicator committee was formed to decide on the indicators for goal 3. It was decided that indicators found relevant by NITI Ayog would also be part of the indicators under goal 3.

Second meeting of SDG cell was convened on 2nd August 2018. Discussions revolved around the list of indicators developed and shared by indicator committee post 1st meeting. Some of the indicators where data was not available were dropped due to non-availability of baseline data and additional indicators pertaining to Geriatric care and Fluorosis were added. The committee decided that target indicators for 2022 and 2030 were to be developed by the health department along with mapping of existing health schemes.

Third meeting of SDG goal 3 was held on 13th November 2018. Indicator matrix that was previously circulated to members was discussed individually. Committee members opined that indicators pertaining to malnutrition and other related areas be dealt by women and child department. Wherever state baseline information was not available, it was decided that data available in National indicators be utilised besides requesting the concerned state departments to develop respective indicators for 2022.

On 4th December 2018, the 4th SGD meeting was held. Prior to this meeting, all indicators in the state matrix were finalised through earlier meetings and over conference calls. Targets and action plan for each of the indicators for 2022 and 2030 was discussed and finalised. It was suggested to strengthen the monitoring and information (MIS) with creation of UID (Unique ID) for each patient. It was decided that essential drugs, instruments and diagnostics be listed along with usage of AYUSH medicines. It was decided to bring out the budgetary allocation till date by Government on Health schemes which includes NRHM, NHM and KHSDRP funds in addition to State and Central funds.

5th meeting of SDG was held on 11th January 2019. Tentative report on situation analysis, AYUSH component and note on strategies, policy frame work for goals by 2022 and 2030 was presented to the committee. Pending work allocated and timelines for completion of the same decided upon.

6th meeting of SDG was held on 2nd February 2019. Timelines for completion of pending tasks were set. Experts for reviewing the final document were finalised and it was decided to request Dr Srinath Reddy, Dr Sudarshan, Dr Ravinarayan) Dr J P Muliyal, and Dr Valiathan to provide their suggestions reviewers. It was also decided to request Dr C N Manjunath, Dr Devi Shetty and Dr. Nagarathna for the foreword to the document. It was tentatively decided to have the last and final meeting on 8th March 2017, before submitting the document to the Government.

ANNEXURE 2

Karnataka State Matrix-

SDG meeting committee was formed with a group of experts from diverse fields. It included representatives from Planning department, Home department, Health department, AYUSH, Statistics Department, Social Welfare department, besides experts in the field of Public health, Paediatrics and other relevant fields.

This state matrix is the outcome of over seven (7) SDG meetings and numerous conference calls where in indicators to be listed under goal 3 of SDG were finalised. It was decided that indicators found relevant by NITI Aayog would also be part of the indicators under goal 3. Targets and action plan for each of the indicators for 2022 and 2030 was discussed and finalised. It was suggested to strengthen the monitoring and information (MIS) with creation of UID (Unique ID) for each patient. It was resolute to bring out the budgetary allocation till date by Government on Health schemes which includes NRHM, NHM and KHSDRP funds in addition to State and Central funds.

Sustainable Development Goals to transform our World

Goal 3: Ensure healthy lives and promote well-being for all at all ages

Targets	State Nodal Dept.	Draft National Indicator	State Indicators	Base Line Year	Source of Data	State Base Line Value (Latest Year)	Target for 2022	Target For 2030
1	2	3	4	5	6	7	8	9
3.1 - By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births	HEALTH & FAMILY WELFARE	3.1.1 : Maternal mortality ratio (Priority Indicator)	3.1.1: MMR (per 1,00,000 live births)	2014-16	SRS-2014-16	108	78	50
	HEALTH & FAMILY WELFARE	3.1.2 : Proportion of births attended by skilled health personnel (Period 5 Years)	3.1.2: Proportion of births attended by skilled health personnel (Period 5 Years)	2015-16	NFHS-4	93.40%	95%	100%
	HEALTH & FAMILY WELFARE	3.1.3 : Proportion of births attended by skilled health personnel (Period 1 Year) (Priority Indicator)	3.1.3: Proportion of births attended by skilled health personnel (Period 1 Year)	2016-17	HMIS	99.74%	100%	100%
	HEALTH & FAMILY WELFARE	3.1.4: Percentage of women aged 15-49 years with a live birth, for last birth,	3.1.4: Percentage of women aged 15-49 years with a live birth, for last birth, who	2015-16	NFHS-4	70.30%	80%	100%

	who received antenatal care, 4 times or more (Period 5 years/ 1 year)	received antenatal care, 4 times or more (Period 5 years/ 1 year);					
HEALTH & FAMILY WELFARE		3.1.5: Proportion of home and institutional deliveries,	2016-17	HMIS	0.41% (Home deliveries) 99.59% (Institutional deliveries)	2.5% (Home deliveries) 97.5% (Institutional deliveries)	100%
HEALTH & FAMILY WELFARE		3.1.6: Proportion of Home deliveries attended by a skilled birth attendant.	2015	NHFS	3.10%	25%	100%
HEALTH & FAMILY WELFARE		3.1.7: Proportion of all pregnancy outcomes beyond 20 weeks who had a Haemoglobin checked	2017-18	HMIS	137.73% probably due to over reporting and duplication	100%	100%
HEALTH & FAMILY WELFARE		3.1.8: Proportion of all pregnancy outcomes beyond 28 weeks who were screened for PIH / Gestational Hypertension	2017-18	HMIS	4.21%	100.00%	100.00 %
HEALTH &		3.1.9:	2016-	HMIS	1.17%	100.00%	100.00

	FAMILY WELFARE		Proportion of all pregnancy outcomes beyond 28 weeks who were screened for Gestational Diabetes	2017				%
3.2 - By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births	HEALTH & FAMILY WELFARE	3.2.1. Under-five mortality rate (Priority Indicator)	3.2.1: Under-five mortality rate,	2015	SRS	31	23	20
	HEALTH & FAMILY WELFARE	3.2.2. Neonatal mortality rate (Priority Indicator)	3.2.2: Neonatal Mortality Rate,	2016	SRS	18	14	10
	HEALTH & FAMILY WELFARE	3.2.3 : Percentage of children aged 12-23 months fully immunized (BCG, Measles and three doses of Pentavalent vaccine) (Priority Indicator)	3.2.3: Percentage of children aged 12-23 months fully immunized (BCG, Measles and three doses of Pentavalent vaccine)	2016	NFHS-4	64%	100%	100%
	HEALTH & FAMILY WELFARE		3.2.4: IMR (per 1000 live births),	2016	SRS	24	16	12
	HEALTH & FAMILY WELFARE		3.2.5: Child Mortality Rate / 1000 live births),	2016	SRS	29	23	20
	HEALTH &		3.2.6:	2016	H & FW	62.60%	100%	100%

	FAMILY WELFARE		Percentage of Children fully immunised (9-11 months) (BCG+DPT3+ OPV+ Measles1),		Dept.			
	HEALTH & FAMILY WELFARE		3.2.7: Proportion of Under 5 children with moderate and severe malnutrition;	2016	NFHS-4	Under weight - 35.2% Stunted - 36.2% Wasted - 26.1%	To reduce to 2% every year of Base Value	Reduct ion by 12% of the Base Value
	HEALTH & FAMILY WELFARE	3.3.1: Number of HIV infections per 1,000 uninfected population (Priority Indicator)	3.3.1: Number of new HIV infections per 1,000 uninfected population,	2017-18	SIMS	6.22	As directed by NACO * Every year NACO as been providing the target	As directe d by NACO * Every year NACO as been providi ng the target
	HEALTH & FAMILY WELFARE	3.3.2: Tuberculosis incidence per 100,000 population (Priority Indicator)	3.3.2: Tuberculosis incidence per 100,000 population;	2017	RNTCP perform ance reports	118 (Per Lakhs population)	104	44
	HEALTH & FAMILY WELFARE	3.3.3: Malaria incidence per 1,000 population (Priority Indicator)	3.3.3: Malaria incidence per 1,000 population; %	2006	NVBDCP -Annual Report	State API-1.3	All Sub-centers to attain less than 1 API Status	To sustain API = 0 level in all villages and no indigenous cases.
	HEALTH & FAMILY WELFARE	3.3.4: Viral Hepatitis	3.3.4: Viral Hepatitis	Information given under sub indicators				

		(including A, B, C, D, E) incidence per 100,000 population	(including A, B, C, D, E) incidence per 100,000 population					
			3.3.4a: Viral Hepatitis - B incidence per 100,000 Pregnant Women	Jan 2017 to Dec 2017	CBHI portal	NA (Hep B average prevalence is 3-4%	To reduce to 1/3rd of the base line value.	To reduce by 2/3rd of the base line value.
			3.3.4b: Viral Hepatitis - C incidence per 100,000 Pregnant Women	Jan 2017 to Dec 2017	CBHI portal	NA HCV prevalence is 0.09 to 15%)	To reduce to 1/3rd of the base line value.	To reduce by 2/3rd of the base line value.
			3.3.4c: Viral Hepatitis - (Including A , D, E) incidence per 100,000 Pregnant Women	Data is not available. Strategies and action plan developed in the report				
HEALTH & FAMILY WELFARE		3.3.5 : Dengue : Case Fatality Ratio (CFR)	3.3.5: Dengue : Case Fatality Ratio (CFR),	2006	NVBDCP-Annual Report	6.40%	Maintaining CFR less than 1	Maintaining CFR less than 1
HEALTH & FAMILY WELFARE		3.3.6 : Number of Chikungunya Cases	3.3.6: Number of Chikungunya Cases,	2006	NVBDCP-Annual Report	305 cases	Containment of Outbreak	Containment of Outbreak
		3.3.7 : Number of Kala-azar/ V Leishmaniasis	This is a National indicator, State has dropped this indicator					
HEALTH & FAMILY WELFARE		3.3.8 : Number of Lymphatic	3.3.8 : Number of Lymphatic	2017	NVBDCP-Annual Report	16059 confirmed cases	Mf rate less than	Mf rate less than 1 % in all the districts

		Filariasis	Filariasis;				0.5% in all the districts	
	HEALTH & FAMILY WELFARE	3.3.9 : The proportion of Grade -2 cases amongst new cases of Leprosy	3.3.9: The proportion of Grade -2 cases amongst new cases of Leprosy,	2016 -17	NLEP Annual Report	3.52%	To reduce proportion of Grade -2 cases amongst new cases of Leprosy to 3%.	To Grade proportion of G2 <2.%
	HEALTH & FAMILY WELFARE	3.3.10 : HIV Prevalence Rate	3.3.10 Mortality rate attributed to HIV/AIDS	2016 -17	Global Burden of Disease, 2017	(9.0) Age-standardised per 100,000 population	As directed by NACO * Every year NACO as been providing the target	Increased coverage for improved prevention, testing and care linkages • Systematic evidence generation to reach 'at risk' population • Retain KP with adequate and appropriate services
	HEALTH & FAMILY WELFARE		3.3.11: Number of new cases of leprosy	April 2017 to Feb 2018	MPR (Monthly Progress Report)	2682	Prevalence Rate 0.21	0.1
	HEALTH & FAMILY WELFARE		3.3.12: Number of Flurosis cases	2013 -14	RDWSS	20% of existing population of endemic each of 19 districts	Reduction of incidence around 12-15% in endemic districts	Reduction of incidence increase to around 32-45% in endemic districts
	HEALTH & FAMILY WELFARE		3.3.13: Number of Geriatric care	Strategies and action plan developed in the report				

			centers;					
			3.3.14: Kyasanur Forest Disease Virus specific to Karnataka	Strategies and action plan developed in the report				
3.4 - By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being	HEALTH & FAMILY WELFARE	3.4.1: Number of deaths due to cancer	3.4.1: Prevalence of Cancer; % Covered under AYUSH Integrated Cancer Interventio n	2015 -16	NFHS - 4	330 women per 100,000 81 men per 100,000		
	HOME DEPARTM ENT	3.4.2:Suicide mortality rate	3.4.2: Suicide Mortality Rate;	2016 -17	Global Burden of Disease, 2016	(30.7) Age-standardi sed per 100,000 populatio n	20	0
		3.4.3 : Percentage distribution of leading causes groups of deaths	NA	This is National indicator, State has been dropped this indicator				
	HEALTH & FAMILY WELFARE		3.4.4: Proportion of COPD	Strategies and action plan developed in the report			Reducti on by 25%	Reduction by further 30%
	HEALTH & FAMILY WELFARE		3.4.5: Mortality attributable to mental disorders;	Strategies and action plan developed in the report				
	HEALTH & FAMILY WELFARE		3.4.6 Mortality	2016 -17	Global Burden	(57.0) Age-		

			rate attributed to Stroke;		of Disease, 2016	standardised per 100,000 population		
	HEALTH & FAMILY WELFARE		3.4.7: Mortality rate attributed to cardiovascular disease;	2015-16	NFHS -4	1. Women (821 women per 100,000) 2. Men (739 men per 100,000)		
	HEALTH & FAMILY WELFARE		3.4.8 Mortality rate attributed to Diabetes Mellitus;	2016-17	Global Burden of Disease, 2016	(42.0) Age-standardised per 100,000 population		
3.5 - Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol	HEALTH & FAMILY WELFARE, SOCIAL JUSTICE AND EMPOWERMENT	3.5.1 : Percentage of adults (15+ years) who have had at least 60 milliliter or more of pure alcohol on at least one occasion weekly (approximately equalent to standard alcoholic drinks)	3.5.1 : Percentage of adults (15+ years) who have had at least 60 milliliter or more of pure alcohol on at least one occasion weekly (approximately equalent to standard alcoholic drinks);	Strategies and action plan developed in the report				
	HEALTH & FAMILY WELFARE, SOCIAL JUSTICE AND EMPOWERMENT	3.5.2 : Number of persons treated in de-addiction centres	3.5.2: Number of persons treated in de-addiction	2017-18	NIMHANS	32934		

			centres;					
	HEALTH & FAMILY WELFARE	3.5.3 : Percentage of population (men (15-54 years) and women (15-49 years) who consume alcohol	3.5.3: Percentage of population (men (15-54 years) and women (15-49 years) who consume alcohol	Strategies and action plan developed in the report				
	HEALTH & FAMILY WELFARE		3.5.4: Coverage of treatment interventions (pharmacological, psychosocial and AYUSH rehabilitation and aftercare services) for substance use disorders	Strategies and action plan developed in the report				
3.6 - By 2020, halve the number of global deaths and injuries from road traffic accidents	HOME DEPT.	3.6.1:Death rate due to road traffic accidents	3.6.1: : Percentage of Deaths due to road traffic accidents	2016 - 2017	Home Dept - Road Safety cell	11133	9274	9503
3.7 - By 2030, ensure universal access to sexual and	HEALTH & FAMILY WELFARE	3.7.1 : Percentage of currently married women (15-49 years)	3.7.1: Percentage of currently married women (15-49 years)	2015 -16	NFHS - 4	51.30%	60.00%	70.00%

reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes		who use any modern family planning methods	who use any modern family planning methods					
	HEALTH & FAMILY WELFARE	3.7.2 : Percentage of women aged 15-19 years who are already mothers or pregnant	3.7.2: Percentage of women aged 15-19 years who are already mothers or pregnant	2015 -16	NFHS-4	7.80%	5%	Less than 3%
	HEALTH & FAMILY WELFARE	3.7.3 :Institutional births (%) (5 years/1 year)	3.7.3: Institutional births	2015 -16	NFHS-4	94.3	99	100
	HEALTH & FAMILY WELFARE		3.7.4: Percentage of eligible population covered by publicly funded health insurance schemes (Rajiv Aarogyashri , CGHS, ESIS, etc)	2017	Dept.	93%	100%	100%
	HEALTH & FAMILY WELFARE		3.7.5: Hospital beds per 10000 population (In Govt. Hospitals)	2017	Dept.	9 beds per 10000 populatio n	15 per 10000	30 per 10000
3.8 - Achieve universal health	HEALTH & FAMILY WELFARE	3.8.1. Percentage of currently married	3.8.1: Percentage of currently married	2015 -16	NFHS - 4	51.80%	60.00%	70.00%

coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all		women (aged 15-49 years) who use any modern family planning methods	women (aged 15-49 years) who use any modern family planning methods					
	HEALTH & FAMILY WELFARE	3.8.2:Percentage of TB cases successfully treated (cured plus treatment completed) among TB cases notified to the national health authorities during a specified period	3.8.2: Percentage of TB cases successfully treated (cured plus treatment completed) among TB cases notified to the national health authorities during a specified period	2016	RNTCP perform--ance reports	85% Dept : has given as 58%	90%	95%
	HEALTH & FAMILY WELFARE	3.8.3 : Percentage of people living with HIV currently receiving ART among the detected number of adults and children living with HIV	3.8.3: Percentage of people living with HIV currently receiving ART among the detected number of adults and children living with HIV	2004	NACO/ SIMS	144792 Cases	100% Tested populatio n placed on ART	100% Tested population placed on ART
	HEALTH & FAMILY WELFARE	3.8.4 :Proportion of population	3.8.4: Proportion of population	2015 -16	NFHS-4	12.70%		

		in age group 15-49 years who are currently taking antihypertensive medication among age group 15-49 with systolic blood pressure ≥ 140 mmHg, or with diastolic blood pressure ≥ 90mmHg	in age group 15-49 years who are currently taking antihypertensive medication among age group 15-49 with systolic blood pressure ≥ 140 mmHg, or with diastolic blood pressure ≥ 90mmHg						
		3.8.5 : Proportion of population in age group 15-49 years who are currently taking antihypertensive medication diabetes (insulin or glycaemic control pills) among number of adults 15-49 years who are having random blood sugar level - high	3.8.5: Proportion of population in age group 15-49 years who are currently taking antihypertensive medication diabetes (insulin or glycaemic control pills) among number of adults 15-49 years who are having random	2015-16	NFHS-4	10.82%			

		(>140 mg/dl)	blood sugar level - high (>140 mg/dl)					
	HEALTH & FAMILY WELFARE	3.8.6 :Proportion of women aged 30-49 years who report they were ever screened for cervical cancer and the proportion of women aged 30-49 years who report they were screened for cervical cancer during the last 5 years	3.8.6: Proportion of women aged 30-49 years who report they were ever screened for cervical cancer and the proportion of women aged 30-49 years who report they were screened for cervical cancer during the last 5 years	2015 -16	NFHS-4	15.60%	50.00%	70.00%
	HEALTH & FAMILY WELFARE	3.8.7 : Prevalence of current tabacco uses among men and women aged 15-49 years	3.8.7: Prevalence of current tobacco uses among men and women aged 15-49 years	2016 -17	GATS 2	Currently Smoke Tobacco : 16.8% of men, 0.7% of women and 8.8% of all adults Currently Smokeless Tobacco : 22.2% of men, 10.3% of women and	Currently Smoke Tobacco : 10.4% of men, 0.3% of women and 5.7% of all adults Currently Smokeless Tobacco : 21.7% of men, 4.6% of women and 13.2% of	Currently Smoke Tobacco : 4% of men, 0.2% of women and 2.6% of all adults Currently Smokeless Tobacco : 21.2% of men, 2.6% of women and 10.1% of all adults Either Smoke Tobacco/or Smokeless Tobacco: 26% of men, 2.3% of women

						16.3% of all adults Either Smoke Tobacco/ or Smokeless Tobacco: 35.2% of men, 10.3% of women and 22.8% of adults	all adults Either Smoke Tobacco / or Smokeless Tobacco: 30.6% of men, 4.3% of women and 17.4% of adults	and 12% of adults
	HEALTH & FAMILY WELFARE	3.8.8 : Total physicians, nurses and midwives per 10000 population	3.8.8: Total physicians, nurses and midwives per 10000 population	2017	Health Dept.	4915 doctors, 11930 Staff nurses and 8358 JAHF are working	2 doctors per 1000 population 10 staff Nurse per 1000 population 2 midwives per 1000 population	5 doctors per 1000 population 12 staff nurse per 1000 population 2 5 midwives per 1000 population
	HEALTH & FAMILY WELFARE		3.8.9: Average availability of drugs as per Essential Drug List	2017	Health Dept.	450 to 500	100%	100%
3.9 - By 2030, substantially reduce the number of deaths and	HEALTH & FAMILY WELFARE	3.9.1 : Mortality rate attributed to unintentional poisoning	3.9.1: Incidence of Deaths due to unintentional poisoning	Strategies and action plan developed in the report				
		3.9.2 :	NA	Strategies and action plan developed in the report				

illnesses from hazardous chemicals and air, water and soil pollution and contaminati on		Proportion of men and women reporting Asthma 15-49 years:						
3.A - Strengthen the implement ation of the World Health Organizatio n Framework Convention on Tobacco Control in all countries, as appropriate	HEALTH & FAMILY WELFARE	3.A.1: Prevalence of current tobacco uses among men and women aged 15-49 years	3.A.1: Prevalence of current tobacco uses among men and women aged 15 years and older	2015	GATS-2	22.8		
3.B - Support research and developmen t of vaccines and medicines for the communica ble and non-communica ble diseases that primarily affect	HEALTH & FAMILY WELFARE	3.B.1:Total net official developmen t assistance to medical research and basic health sectors	3.B.1a: % of state health budget allocated to medical research &AYUSH research	Strategies and action plan developed in the report				
			3.B.1b: % of state health budget allocated to basic health sectors &Validation of AYUSH	Strategies and action plan developed in the report				

developing countries, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration on the TRIPS Agreement and Public Health, which affirms the right of developing countries to use to the full the provisions in the Agreement on Trade-Related Aspects of Intellectual Property Rights regarding flexibilities to protect public health, and, in particular, provide access to medicines for all.	HEALTH & FAMILY WELFARE		3.B.1C: % of state health budget allocated to AYUSH-clinical Practice; Professional Education; Research & Development	18-19	State Budget	146.0 crores	1925.0 crores	7900.00 crores
			3.B.2: Budget expenditure on health as a % of State GDP	2017-18	State Budget Volume I & II	5118.24 Crores		
	HEALTH & FAMILY WELFARE		3.B.3: Rate of Out - of - Pocket expenditure on health	2015-16	NFHS - 4	4824		
3.C - Substantiall	HEALTH & FAMILY WELFARE	3.C.1:Total physicians,	3.C.1: Total physicians,	2017	Dept.	4915 doctors,		

y increase health financing and the recruitment ,		nurses and midwives per 10000 population	nurses and midwives per 10000 population			11930 Staff nurses and 8358 JAHF are working		
developme nt, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States			3.C.1a: Total AYUSH physicians, AYUSH nurses and Therapists per 10000 population	2018 -16	Dept.	Total Group A:1073, Group B:46, Group C1129 Group D:1650	NA	NA
	FINANCE	3.C.2 : Percentage of public investment in health as proportion to GDP	3.C.2: Percentage of public investment in health as proportion to GDP	Strategies and action plan developed in the report				
3.D - Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and manageme nt of national and global health risks	HEALTH & FAMILY WELFARE	3. D.1:Percent age of attributes of 13 core capacities [1. National legislation, policy and financing 2. Coordinatio n and national Focal Point Communicat ions 3. Surveillance 4. Response 5. Preparednes s 6. Risk Communicat	3.D.1: Percentage of attributes of 13 core capacities	2017	-	Integrated Disease Surveillance Program (IDSP) looks after the surveillance aspects of diseases mentioned in the L-form (Dengue, Chikungunya, JE, Meningococcal Meningitis, Typhoid Fever, Diphtheria, Cholera, Shigella Dysentery, Viral Hepatitis A, Viral Hepatitis E, Leptospirosis, and Malaria). IDSP is not a target based program. Still an attempt has been made to provide the requested details.		
			1. National legislation, policy and financing		- -	-	-	-
			2. Coordinatio n and national Focal Point Communica tions		- -	One SSU & 26 DSUs are the main focal points to collect		

		ion 7. Human Resources 8. Laboratory 9. Point of entry 10. Zoonotic events 11. Food safety 12. Chemical events 13. Radio nuclear emergencies] that have been attained at a specific point in time	(District Surveillance Unit is the main focal point for communication)			data		
			3. Surveillance	2017	IDSP Portal	Reporting Units- S-Forms:9679, P-Forms: 3667, L-Forms:3252	100% in govt sector; Private reporting to be improved.	100%
			4. response	2017	RRT (Rapid Response Team)	Total outbreaks: 152	100%	100%
			5. Preparedness	2017	RRT	31 RRTs	100%	100%
			6. Risk Communication (Early Warning Signals (EWS) and Analysis Alerts and Media Scanning)	2017	IDSP Portal	EWS: 192; Analysis Alerts:29; Media Alert: 28	-	-
			7. Human Resources (Regular posts & NHM Posts)	2017	GOs, GOI guidelines	-	-	-
			8. Laboratory	2017	IDSP Portal-DSL/DPHL, RL	District Surveillance Lab:12; District	NA	NA

						Public Health Lab: 14; Referral Lab : 8			
			9. Point of entry		- -	-	-	-	
			10. Zoonotic events		2017 GOI notification and communications from Animal Husbandry dept.	-	-	-	
			11. Food safety		- -	-	-	-	
			12. Chemical events		- -	-	-	-	
			13. Radio nuclear emergencies] that have been attained at a specific point in time		- -	-	-	-	
	REVENUE DEPT. (DISASTER CELL)		3.D.2: Availability of District and State Disaster Management Plans	2017-18	Revenue (Disaster Management Cell)	100%	100%	100%	

ANNEXURE 3

ANNEXURE 3

SDG meeting committee was formed with a group of experts from diverse fields. It included representatives from Planning department, Home department, Health department, AYUSH, Statistics Department, Social Welfare department, besides experts in the field of Public health, Paediatrics and other relevant fields.

On 4th December 2018, 4th SGD meeting was held. Prior to this meeting, all indicators in the state matrix were finalised through earlier meetings and over conference calls. Targets and action plan for each of the indicators for 2022 and 2030 was discussed and finalised. It was suggested to strengthen the monitoring and information (MIS) with creation of UID (Unique ID) for each patient. **It was decided that essential drugs, instruments and diagnostics be listed along with usage of AYUSH medicines. Integration of AYUSH with the existing heath care system was discussed.** It was resolute to bring out the budgetary allocation till date by Government on Health schemes which includes NRHM, NHM and KHSDRP funds in addition to State and Central funds.

2. **Integrated Garbhacharya through AYUSH ANC & PNC Kit**			
Integrated Garbhacharya AYUSH Center [with Kits] • Ayurvedic ANC & PNC Kits • Naturopathyic Home Remedies • Yoga for Healthy Pregnancy • AYUSH Health Education	Mode of Implementation: Public –Private Partnership Estimation/Scale: 1. Modern Medicine District Hospitals 2. AYUSH District Hospitals 3. AYUSH Medical Colleges 4. Modern Medical Colleges	• Ayurveda Physician -1 • Yoga & Naturopathy Physician – 1 • Yoga Therapist – 1 • Nursing Staff – 2 • Multi-Purpose Assts- 2 • Train all AYUSH Physicians For Garbha sanskara Kits & Yoga Therapy Through an Intensive Week-long Training Program • Orientation Program for Modern Medicine Physicians • Evolve data format for Clinical Documentation for a year to demonstrate the efficacy of the system	• Physical Infrastructure to house the Units • AYUSH ANC & PNC with Kits • Yoga Therapy Room with all The accessories needed for Pre & Post Natal Yoga Classes • IT Infrastructure for Clinical Documentation • IEC Materials for Garbhasanskara Counselling • Professional Resource Materials For Orientation Program for Physicians of Modern Medicine
3. **Integrated Garbhasanskara Public Campaign**			
AYUSH Garbhasanskara Awareness Campaign • Ayurvedic Home Remedies • Naturopathic Home Therapies • Yoga for Healthy Pregnancy • AYUSH Health Education	Mode of Implementation: Public –Private Partnership Estimation/Scale: State-Wide Campaign	• Train all AYUSH Physicians For Garbha sanskara Counseling Through an Intensive Week-long Training Program • Develop an exclusive portal for AYUSH Garbha Sanskara Care	• IEC Materials for Garbhasanskara Campaign on Print-electronic-Digital Media • Yoga Therapy at a community Facility in the Rural/Sub-urban & Urban Settings

Action Plan	Implementation	Manpower & Training	Infrastructure & Recurring Costs

SDG – KARNATAKA

1. AYUSH Garbhasanskara Counseling			
Garbhasanskara Counseling [with no kits] • Ayurvedic & Naturopathic Home Remedies • Yoga for Healthy Pregnancy • AYUSH Health Education	Mode of Implementation: Public –Private Partnership Estimation/Scale: • AYUSH Dispensaries & Hospitals • Modern Medical Dispensaries & Hospitals • In Phases till 2030	• Appoint 1-Yoga Therapist in each Of the AYUSH and Medical Hospital • Train all AYUSH Physicians For Garbha sanskara Counseling Through an Intensive Week-long Training Program • Evolve data format for adoptation and Collect Data for a year and to demonstrate the efficacy of the system	• Yoga Therapy Room with all The accessories needed for Pre & Post Natal Yoga Classes • IEC Materials for Garbhasanskara Counselling
3. Integrated Garbhacharya through AYUSH ANC & PNC Kit			
Integrated Garbhacharya AYUSH Center [with Kits] • Ayurvedic ANC & PNC Kits • Naturopathyic Home Remedies • Yoga for Healthy Pregnancy • AYUSH Health Education	Mode of Implementation: Public –Private Partnership Estimation/Scale: 5. Modern Medicine District Hospitals 6. AYUSH District Hospitals 7. AYUSH Medical Colleges 8. Modern Medical Colleges	• Ayurveda Physician -1 • Yoga & Naturopathy Physician – 1 • Yoga Therapist – 1 • Nursing Staff – 2 • Multi-Purpose Assts- 2 • Train all AYUSH Physicians For Garbha sanskara Kits & Yoga Therapy Through an Intensive Week-long Training Program • Orientation Program for Modern Medicine Physicians • Evolve data format for Clinical Documentation for a year to demonstrate the efficacy of the system	• Physical Infrastructure to house the Units • AYUSH ANC & PNC with Kits • Yoga Therapy Room with all The accessories needed for Pre & Post Natal Yoga Classes • IT Infrastructure for Clinical Documentation • IEC Materials for Garbhasanskara Counselling • Professional Resource Materials For Orientation Program for Physicians of Modern Medicine
3. **Integrated Garbhasanskara Public Campaign**			

AYUSH Garbhasanskara Awareness Campaign • Ayurvedic Home Remedies • Naturopathic Home Therapies • Yoga for Healthy Pregnancy • AYUSH Health Education	Mode of Implementation: Public –Private Partnership Estimation/Scale: State-Wide Campaign	• Train all AYUSH Physicians For Garbha sanskara Counselling Through an Intensive Week-long Training Program • Develop an exclusive portal for AYUSH Garbha Sanskara Care	• IEC Materials for Garbhasanskara Campaign on Print-electronic-Digital Media • Yoga Therapy at a community Facility in the Rural/Sub-urban & Urban Settings

GOAL – 3.2.7= Proportion of Under 5 children with moderate and severe malnutrition;

% Covered by AYUSH Shishu Sanskara & Shishu Poshan

Action Plan	Implementation	Manpower & Training	Infrastructure & Recurring Costs
1. AYUSH Integrated Supraja Shishu Sanskara & AYUSH Shishu Poshan Kit			
Integrated Pediatrics AYUSH Units [with Shishu Poshan Kits] • Ayurvedic Shishu Poshan Kits • Naturopathyic Home Remedies • AYUSH Health Education	Mode of Implementation: Public –Private Partnership Estimation/Scale: 9. Modern Medicine District Hospitals 10. AYUSH District Hospitals 11. AYUSH Medical Colleges 12. Modern Medical Colleges	• Ayurveda Physician -1 • Nursing Staff – 2 • Train all AYUSH Physicians For Garbha sanskara Kits Through an Intensive Week-long Training Program • Orientation Program for Modern Medicine Physicians • Evolve data format for Clinical Documentation for a year to demonstrate the efficacy of the system	• Physical Infrastructure to house the Units • AYUSH Shishu Poshan Kits • Professional Resource Materials For Orientation Program for Physicians of Modern Medicine IEC Materials for Supraja Shishu Sanskara & AYUSH Shishu Poshan Kit
2. AYUSH Integrated Supraja Shishu Sanskara & AYUSH Shishu PoshanPublic Campaign			
AYUSH Supraja Shishu Sanskara & AYUSH Shishu Poshan Awareness Campaign • Ayurvedic Home Remedies	Mode of Implementation: Public –Private Partnership Estimation/Scale:	• Train all AYUSH Physicians For Supraja Shishu Sanskara Counselling Through an Intensive Week-long Training Program • Develop an exclusive portal for	• IEC Materials for Supraja Shishu Campaign on Print-electronic-Digital Media

• Naturopathic Home Therapies • AYUSH Health Education	State-Wide Campaign	AYUSH Supraja Child Care	

GOAL 3.3.2: Tuberculosis incidence per 100,000 population;

% Covered under AYUSH Integrated Anti-Tuberculosis Intervention

Action Plan	Implementation	Manpower & Training	Infrastructure & Recurring Costs
2. Integrated Resiprology with AYUSH Adjunct Intervention			
Integrated Respirology AYUSH Units • Ayurvedic Rejuvination Kits • Homoeopathic Medicine • Naturopathyic Home Remedies • Yoga Therapy • AYUSH Health Education	Mode of Implementation: Public –Private Partnership Estimation/Scale: • Modern Medicine District Hospitals • AYUSH District Hospitals • AYUSH Medical Colleges • Modern Medical Colleges	• Ayurveda Physician -1 • Nursing Staff – 2 • Train all AYUSH Physicians For Anti-Tuberculosis Herbs & Yoga Therapy Through an Intensive Week-long Training Program • Orientation Program for Modern Medicine Physicians • Evolve data format for Clinical Documentation for a year to demonstrate the efficacy of the system	• Physical Infrastructure to house the Units • AYUSH Anti-Tuberculosis Herbs & Medicines • Professional Resource Materials For Orientation Program for Physicians of Modern Medicine IEC Materials for Supraja Shishu Sanskara & AYUSH Shishu Poshan Kit
2. **AYUSH Integrated National Tuberculosis ControlPublic Campaign**			
National Tuberculosis Control Program with adjunct AYUSH Intervention Campaign • Ayurvedic Home Remedies • Naturopathic Home Therapies • Yoga Therapy • AYUSH Health Education	Mode of Implementation: Public –Private Partnership Estimation/Scale: State-Wide Campaign	• Train all AYUSH Physicians; Pulmonologists and ASHA Workers For AYUSH Intervention for Tuberculosis Through an Intensive Week-long Training Program Develop an exclusive portal for AYUSH Tuberculosis Care	• IEC Materials for Integrated Tuberculosis Control Program & Campaign on Print-electronic-Digital Media

GOAL 3.3.3: Malaria incidence per 1,000 population; % Covered under AYUSH Integrated Anti-Malaria Intervention

Action Plan	Implementation	Manpower & Training	Infrastructure & Recurring Costs
3. Integrated Anti-Malaria with AYUSH Adjunct Intervention			
Integrated Anti-Malaria AYUSH Units • Ayurvedic Anti-Malaria Herbs • Ayurvedic Malaria Prevention Larvacides • Naturopathyic Home Remedies • AYUSH Health Education	Mode of Implementation: Public –Private Partnership Estimation/Scale: • Modern Medicine District Hospitals • AYUSH District Hospitals • AYUSH Medical Colleges • Modern Medical Colleges	• Ayurveda Physician -1 • Nursing Staff – 2 • Train all AYUSH Physicians For National Malaria Control Program with Anti-Malaria Herbs Through an Intensive Week-long Training Program • Orientation Program for Modern Medicine Physicians • Evolve data format for Clinical Documentation for a year to demonstrate the efficacy of the system	• Physical Infrastructure to house the Units • AYUSH Anti-Malaria Kits • Professional Resource Materials For Orientation Program for Physicians of Modern Medicine IEC Materials for Malaria Control Program with AYUSH Adjunct Intervention
2. AYUSH Integrated National Malaria ControlPublic Campaign			
AYUSH Anti-Malaria Awareness Campaign • Ayurvedic Home Remedies & Herbs • Naturopathic Home Therapies • AYUSH Health Education	Mode of Implementation: Public –Private Partnership Estimation/Scale: State-Wide Campaign	• Train all AYUSH Physicians; General Physicians and ASHA Workers For AYUSH Anti - MalariaAdjunct Intervention Through an Intensive Week-long Training Program	IEC Materials for AYUSH Anti-Anti - MalariaAwareness Campaign on Print-electronic-Digital Media

GOAL 3.3.8: Number of Lymphatic Filariasis; % Covered under AYUSH Integrated Anti-Lymphatic Filariasis Intervention

Action Plan	Implementation	Manpower & Training	Infrastructure & Recurring Costs
4. Integrated Dermartology/Anti-Lymphatic Filariasis with AYUSH Adjunct Intervention			
		• Ayurveda Physician -1	• Physical Infrastructure to

Integrated Anti-Lymphatic Filariasis AYUSH Units • Ayurvedic Anti-Lympahtic Filariasis Herbs for External Application • Indian Manual Ayurvedic Lymphatic Drainage Massage [IMLD] • Yoga Therapy • Naturopathyic Home Remedies • AYUSH Health Education	Mode of Implementation: Public –Private Partnership Estimation/Scale: • Modern Medicine District Hospitals • AYUSH District Hospitals • AYUSH Medical Colleges • Modern Medical Colleges	• Ayurvedic Panchakarma Therapists - 2 • Nursing Staff – 2 • Train all AYUSH Physicians For National Vector-Borne Disease Control Program with Adjunct AYUSH Anti- Lymphatic Filariasis Intervention Through an Intensive Week-long Training Program • Orientation Program for Modern Medicine Physicians • Evolve data format for Clinical Documentation for a year to demonstrate the efficacy of the system	house the Units with space to offer Massage & Yoga Therapy • AYUSH Anti-LF Oils & Manual For IMLD Massage • Professional Resource Materials For Orientation Program for Physicians of Modern Medicine • IEC Materials for Lymphatic Filariasis Control Program with AYUSH Adjunct Intervention
2. **AYUSH Integrated National Lymphatic Filariasis ControlPublic Campaign**			
AYUSH Anti-Lymphatic Filariasis Awareness Campaign • Ayurvedic Anti-Lympahtic Filariasis Herbs for External Application • Indian Manual Ayurvedic Lymphatic Drainage Massage [IMLD] • Yoga Therapy • Naturopathyic Home Remedies • AYUSH Health Education	Mode of Implementation: Public –Private Partnership Estimation/Scale: State-Wide Campaign	• Train all AYUSH Physicians; Dermatologists and ASHA Workers on AYUSH Anti-Lymphatic Filariasis Adjunct Intervention Through an Intensive Week-long Training Program • Develop an exclusive portal for AYUSH Care for LF	• IEC Materials for Anti-Lymphatic Filariasis Awareness Campaign on Print-electronic-Digital Media

GOAL 3.4.1: Prevalence of Cancer; % Covered under AYUSH Integrated Cancer Intervention

Action Plan	Implementation	Manpower & Training	Infrastructure & Recurring Costs
1. Preventive Oncology/Cancer Care:			
AYUSH Cancer Prevention Units – as part of the hospital /community center/mobile cancer screening teams • Ayurvedic Immune-modulating and Anti-Carcinogenic Single Herbs • Yoga Therapy for Managing Side Effects & Quality of Life • Naturopathyic Functional Foods • AYUSH Health Education	Mode of Implementation: Public –Private Partnership Estimation/Scale: Identify Number of Conventional Can Screening Units Units across the State- • Cancer Specialty Departments & Hospitals • District Hospitals • Medical Colleges • AYUSH Medical Colleges	• AYUSH Doctor – 1 • Masters in Public Health/Masters in Social Work Masters in Mass Communication - 1 • 1 month Training Program For Cancer Prevention Educators • Adopt Evidence Based AYUSH Cancer Prevention Protocols • Orientation Program for Modern Medicine Physicians • Identify & Isolate Carcinogens in Food; Air; Water & Lifestyle	• Physical Infrastructure to house the AYUSH Cancer PreventionUnits • Audio-Visual sets for An effective Communication • IEC Materials for Patient Education; Physician Education through Print-Electronic-Digital Media • Planned daily; weekly; monthly; Quarterly; half-yearly and annual Hospital based/campaign based/ Program based programs
a. Training ASHA workers in Cancer Prevention	Mode of Implementation: Government through AYUSH Cancer Prevention Educators Estimation/Scale : Identify number of ASHA workers And plan the phased training & implementation	• AYUSH Cancer Prevention Educators to train ASHA workers • Group training for 2 days with invited experts • Develop & Update Teaching Resource Materials for the Training Program Develop Patient Education Materials for the use by ASHA	• Training Cost for each group of ASHA workers • IEC Materials for the Training • IEC Material for the Education of Patients by the ASHA workers

		workers	
c. Public Cancer Prevention Campaign	Mode of Implementation: Outsource to a professional agency Print-Electronic-Digital Campaign all through the year and Specially on World Cancer Day	• Develop IEC material for patient education • Develop an exclusive portal for AYUSH Cancer Care	• Develop IEC materials • Campaign plan & execution • Monitor the impact of the campaign
2. Integrative Oncology/ Cancer Care:			
Integrative Cancer Care Center with Clinical Documentation through e-Health • Ayurvedic Immune-modulating and Anti-Cancer Single Herbs • Yoga Therapy for Immune – Modulation; Tumor Modulation • Naturopathyic Functional Foods • AYUSH Health Education	Mode of Implementation: Public –Private Partnership Estimation/Scale: • Kidwai Memorial Cancer Center • Regional Cancer Center, Hubli • District Medical Hospitals • Medical College Teaching Hospitals • AYUSH Medical College Teaching Hospitals	• Ayurveda Physician – 2 • Yoga & Naturopathy Physician -2 • Public Health Professional -1 • Multi-purpose therapists – 4 • Ayurveda Pharmacist – 1 • General Assistants – 2 • 3 Months training for AYUSH Physicians on Integrative Oncology • Orientation Program for Oncologists • Develop Training Curriculum And Program • Adopt Evidence Based AYUSH Integrative Oncology Protocols • Clinical Data Documentation And registry • Platform for Clinical Trials	• Physical & Technical Infrastructure to house the Integrative Cancer Care Centers • Establishment & Operational costs • Data Documentation & Registry • Clinical Trial Lab Infrastructure • Professional Resource Materials For Orientation Program for Oncologists • IEC Materials for Integrative Oncology with AYUSH Adjunct Intervention
3. Palliative Oncology/Cancer Care:			

AYUSH Cancer Care Center • Ayurvedic/Unanai/Naturopathic Palliative Therapies • Ayurvedic Immune-modulating and Anti-Cancer Single Herbs • Yoga Therapy for Immune – Modulation; Tumor Modulation • Naturopathyic Functional Foods • AYUSH Health Education	Mode of Implementation: Government through Contracted Manpower OR Public –Private Partnership Estimation: 30 District Hospitals	• Ayurveda Physician - 1 • Yoga & Naturopathy Physician - 1 • Multi-purpose therapists - 2 • General Assistants – 1 • 3 Months training for Physicians on Integrative Oncology • Develop Training Curriculum And Program • Adopt Evidence Based AYUSH Palliative Oncology Protocols • Clinical Data Documentation And registry	• Physical & Technical Infrastructure to house the Integrative Cancer Care Centers • Establishment & Operationa costs • Data Documentation & Registry • Clinical Trial Lab Infrastructure • IEC Materials for Integrative Oncology with AYUSH Adjunc Intervention

GOAL 3.4.2: Suicide Mortality Rate;

% Covered under AYUSH Integrated Anti-Depression Intervention & Suicide Prevention Program

Action Plan	**Implementation**	**Manpower & Training**	**Infrastructure & Recurring Costs**
1. Preventive Psychiatry-Screening & Prevention of Depression & Suicide:			
a. AYUSH Mental Health Units – as part of the AYUSH Wellness Center in each of the 227 Talukas of the State Structure of the	Mode of Implementation: Public –Private Partnership based on National Mental Health Policy Estimation/Scale:	• Develop 1 month Training Program as per based on the National Mental Health Policy • Adopt Evidence Based AYUSH Mental Health Protocols • Orientation Program for Psychiatrists	• Physical & Technical Infrastructure to house the Mental Health Care Centers • Establishment & Operational costs • Data Documentation & Registry • Clinical Trial Lab Infrastructure

AYUSH Wellness Center • AYUSH Doctor-1 • Masters in Public Health/ Masters in Social Work/ Masters in Mass Communication – 1 • Multi-Purpose Therapists-2 • General Assistants - 2	• All Taluks in Phases • Medical Colleges • AYUSH Medical Colleges	• Identify Child, Women, Elderly Stress & Lifestyle Risk factors for Common Mental Health Disorders	• IEC Materials for Patient Education; Physician Education;-Electronic-Digital Media • Planned daily; weekly; monthly; Quarterly; half-yearly and annual Hospital based/campaign based/ Program based programs
b. Training ASHA workers in Depression & Suicide Prevention	Mode of Implementation: Government through AYUSH Depression & Suicide Prevention Educators Estimation: Identify number of ASHA workers And plan the phased training & implementation	• AYUSH Mental Health Prevention Educators to train ASHA workers • Group training for 2 days with invited experts • Develop & Update Teaching Resource Materials for the Training Program • Develop Patient Education Materials for the use by ASHA workers	• Training Cost for each group of ASHA workers • IEC Material for the Education of Patients by the ASHA workers
c. Mental Health/ Healthy Mind Campaign	Mode of Implementation: Outsource to a professional agency Print-Electronic-Digital Campaign all through the year and Specially on World Mental Health Day	• Develop IEC material for patient education • Develop an exclusive portal for AYUSH Mental Health Care	• Develop IEC materials • Campaign plan & execution • Monitor the impact of the campaign
3. Integrative Social Psychiatry: Suicide Help Line & Community Program			

Integrative Depression & Suicide Care Center • Ayurvedic Mental Health Single Herbs • Yoga Therapy for Mental Health • Naturopathyic Therapies • AYUSH Health Education	Mode of Implementation: Public –Private Partnership Estimation/Scale: 30+20=50 centers • District Hospitals • 10 Medical Colleges • 10 AYUSH Medical Colleges	• Ayurveda Physician - 2 • Yoga & Naturopathy Physician -2 • Public Health Professional -1 • Multi-purpose therapists - 4 • Ayurveda Pharmacist - 1 • General Assistants – 2 • 3 Months training for Physicians on Integrative Psychiatry • Develop Training Curriculum And Program based on National Mental Health Policy • Adopt Evidence Based AYUSH • Integrative Psychiatry Protocols for Common Mental Health Disorders • Adopt Evidence Based AYUSH • Integrative Psychiatry Protocols for Severe Mental Health Disorders • Clinical Data Documentation And registry • Platform for Clinical Trials	• Physical & Technical Infrastructure to house the Integrative Psychiatry Care Centers • Establishment & Operational costs • Data Documentation & Registry • Clinical Trial Lab Infrastructure • Professional Resource Materials For Orientation Program for Psychiatrists • IEC Materials for Integrative Psychiatry with AYUSH Adjunct Intervention
3. Integrative Psychiatric Rehab:			
AYUSH Integrated Psychiatric Rehab Center for Severe Mental Health Diseases • Ayurvedic Mental Health Single Herbs • Yoga Therapy for Mental Health	Mode of Implementation: Public –Private Partnership • Regional Mental Health Hospitals, at Mangaluru, Hubli, Bellary, Shimoga, Belgaum, Bidar, Raichur, Viyayapura, Gulbarga	• Ayurveda Physician - 2 • Yoga & Naturopathy Physician - 2 • Multi-purpose therapists - 10 • General Assistants – 4 • 3 Months training for Physicians on Integrative Psychiatric Rehab • Develop Training Curriculum	• Physical & Technical • Infrastructure to house the • Integrative Psychiatry Rehab Centers • Establishment & Operational costs • Data Documentation & Registry • Clinical Trial Lab Infrastructure • Professional Resource Materials For Orientation Program for

• Naturopathyic Therapies • AYUSH Health Education		And Program based on Global Standards of Psychiatric Rehab • Adopt Evidence Based AYUSH Integrative Psychiatric Rehab Protocols • Clinical Data Documentation And registry	Psychiatrists • IEC Materials for Integrative Psychiatric Rehab with AYUSH Adjunct Intervention

GOAL 3.4.5: Mortality attributable to mental disorders; % Covered under AYUSH Integrated Mental Health Intervention

Action Plan	**Implementation**	**Manpower & Training**	**Infrastructure & Recurring Costs**
1. Preventive Mental Health/Healthy Mind Care:			
a. <u>AYUSH Mental Health Units –</u> as part of the AYUSH Wellness Center in each of the 227 Talukas of the State Structure of the **AYUSH Wellness Center** • AYUSH Doctor-1 • Masters in Public Health/ Masters in Social Work/ Masters in Mass Communication – 1 • Multi-Purpose Therapists-2 • General Assistants - 2	<u>Mode of Implementation:</u> Public –Private Partnership based on National Mental Health Policy Estimation/Scale: • All Talukas in Phases • Medical Colleges • AYUSH Medical Colleges	• Develop 1 month Training Program as per based on the National Mental Health Policy • Adopt Evidence Based AYUSH Mental Health Protocols • Orientation Program for Psychiatrists • Identify Child, Women, Elderly Stress & Lifestyle Risk factors for Common Mental Health Disorders	• Physical & Technical Infrastructure to house the Mental Health Care Centers • Establishment & Operational costs • Data Documentation & Registry Clinical Trial Lab Infrastructure • IEC Materials for Patient Education; Physician Education;-Electronic-Digital Media • Planned daily; weekly; monthly; Quarterly; half-yearly and annual Hospital based/campaign based/ Program based programs
b. <u>Training ASHA workers in Mental Health</u>	<u>Mode of Implementation:</u> Government through AYUSH	• AYUSH Mental Health Prevention Educators to train ASHA workers	• Training Cost for each group of ASHA workers

	Cancer Prevention Educators Estimation: Identify number of ASHA workers And plan the phased training & implementation	• Group training for 2 days with invited experts • Develop & Update Teaching Resource Materials for the Training Program • Develop Patient Education Materials for the use by ASHA • workers	• IEC Material for the Education of Patients by the ASHA workers
c. Mental Health/Healthy Mind Campaign	Mode of Implementation: Outsource to a professional agency Print-Electronic-Digital Campaign all through the year and Specially on World Mental Health Day	• Develop IEC material for patient education • Develop an exclusive portal for AYUSH Mental Health Care	• Develop IEC materials • Campaign plan & execution • Monitor the impact of the campaign
4. Integrative Psychiatry:			
Integrative Psychiatric Care Center • Ayurvedic Mental Health Single Herbs • Yoga Therapy for Mental Health • Naturopathyic Therapies • AYUSH Health Education	Mode of Implementation: Public –Private Partnership Estimation: 30+20=50 centers • District Hospitals • 10 Medical Colleges • 10 AYUSH Medical Colleges	• Ayurveda Physician - 2 • Yoga & Naturopathy Physician -2 • Public Health Professional -1 • Multi-purpose therapists - 4 • Ayurveda Pharmacist - 1 • General Assistants – 2 • 3 Months training for Physicians on Integrative Psychiatry • Develop Training Curriculum And Program based on National	• Physical & Technical Infrastructure to house the Integrative Psychiatry Care Centers • Establishment & Operational costs • Data Documentation & Registry • Clinical Trial Lab Infrastructure • Professional Resource Materials For Orientation Program for Psychiatrists • IEC Materials for Integrative Psychiatry with AYUSH

		Mental Health Policy • Adopt Evidence Based AYUSH • Integrative Psychiatry Protocols for Common Mental Health Disorders • Adopt Evidence Based AYUSH • Integrative Psychiatry Protocols for Severe Mental Health Disorders • Clinical Data Documentation And registry • Platform for Clinical Trials	Adjunct Intervention
3. Integrative Psychiatric Rehab:			
<u>AYUSH Integrated Psychiatric Rehab Center for</u> <u>Severe Mental Health Diseases</u> • Ayurvedic Mental Health Single Herbs • Yoga Therapy for Mental Health • Naturopathyic Therapies • AYUSH Health Education	<u>Mode of Implementation:</u> Public –Private Partnership • Regional Mental Health Hospitals, at Mangaluru, Hubli, Bellary, Shimoga, Belgaum, Bidar, Raichur, Viyayapura, Gulbarga	• Ayurveda Physician - 2 • Yoga & Naturopathy Physician - 2 • Multi-purpose therapists - 10 • General Assistants – 4 • 3 Months training for Physicians on Integrative Psychiatric Rehab • Develop Training Curriculum And Program based on Global Standards of Psychiatric Rehab • Adopt Evidence Based AYUSH Integrative Psychiatric Rehab Protocols • Clinical Data Documentation And registry	• Physical & Technical • Infrastructure to house the • Integrative Psychiatry Rehab Centers • Establishment & Operational costs • Data Documentation & Registry • Clinical Trial Lab Infrastructure • Professional Resource Materials For Orientation Program for Psychiatrists • IEC Materials for Integrative Psychiatric Rehab with AYUSH Adjunct Intervention

GOAL 3.4.6: Mortality rate attributed to Stroke;

<u>% Covered under AYUSH Integrated Anti-Hypertension Intervention & Stroke Rehabilitation</u>

Action Plan	Implementation	Manpower & Training	Infrastructure & Recurring Costs
1. Prevent Stroke Campaign & AYUSH Stroke Prevention Unit:			
AYUSH Stroke Prevention Units as part of the AYUSH Wellness Center in each of the 227 Talukas of the State Structure of the **AYUSH Wellness Center** • AYUSH Doctor-1 • Masters in Public Health/ Masters in Social Work/ Masters in Mass Communication – 1 • Multi-Purpose Therapists-2 • General Assistants - 2	Mode of Implementation: Public –Private Partnership Estimation/Scale: • All Taluks in Phases • Medical Colleges • AYUSH Medical Colleges	• Develop 2 week Training Program Stroke Prevention Educators • Develop Evidence Based AYUSH • Stroke Prevention Protocols • Develop Evidence Based AYUSH Hypertension Reversal Protocols • Orientation Program for General Physicians & Neurologists	• Physical & Technical Infrastructure to house the AYUSH Stroke Care Centers • Establishment & Operational costs • Data Documentation & Registry • Clinical Trial Lab Infrastructure • IEC Materials for Patient Education; Physician Education;-Electronic-Digital Media • Planned daily; weekly; monthly; Quarterly; half-yearly and annual Hospital based/campaign based/ Program based programs
a. Training ASHA workers in Stroke Prevention	Mode of Implementation: Government through AYUSH Cancer Prevention Educators Estimation/Scale: Identify number of ASHA workers And plan the phased training & implementation	• AYUSH Stroke Prevention Educators to train ASHA workers • Group training for 2 days with invited experts • Develop & Update Teaching Resource Materials for the Training Program Develop Patient Education Materials for the use by ASHA workers	• Training Cost for each group of ASHA workers • IEC Materials for the Training • IEC Material for the Education of Patients by the ASHA workers
c. Public Stroke Prevention	Mode of Implementation:	• Develop IEC material for patient education	• Develop IEC materials • Campaign plan & execution

Campaign	Outsource to a professional agency Print-Electronic-Digital Campaign all through the year and Specially on World Stroke Day	• Develop an exclusive portal for AYUSH Stroke Care	• Monitor the impact of the campaign
5. Integrative Neurology / Integrative Stroke Rehab:			
Integrative Neurology & Stroke Rehab Center • AYUSH Neuroprotective & Neurotropic Single Herbs • Yoga Therapy • Naturopathyic Therapies • AYUSH Health Education	Mode of Implementation: Public –Private Partnership Estimation: 30 + 20 = 50 centers • District Hospitals • 10 Medical Colleges • 10 AYUSH Medical Colleges	• Ayurveda Physician - 2 • Yoga & Naturopathy Physician -2 • Public Health Professional -1 • Multi-purpose therapists - 4 • Ayurveda Pharmacist - 1 • General Assistants – 2 • 3 Months training for Physicians • on Integrative Neurology • Develop Training Curriculum And Program • Adopt Evidence Based AYUSH Integrative Neurology Protocols • Clinical Data Documentation And registry • Platform for Clinical Trials	• Physical & Technical Infrastructure to house the • Integrative Neurology Care Centers • Establishment & Operational costs • Data Documentation & Registry • Clinical Trial Lab Infrastructure • Professional Resource Materials • For Orientation Program for Neurologists & Physiatrists • IEC Materials for Integrative Neurology with AYUSH Adjunct Intervention

GOAL 3.4.7: Mortality rate attributed to cardiovascular disease;

~~% Covered under AYUSH Integrated Cardiac Intervention & Cardiac Rehab~~

Action Plan	Implementation	Manpower & Training	Infrastructure & Recurring Costs
1. Preventive Cardiology/Heart Care:			
a. AYUSH Heart Disease Prevention / Healthy Heart Units – as part of the AYUSH Wellness Center in each of the 227 Talukas of the State Structure of the **AYUSH Wellness Center** • AYUSH Doctor-1 • Masters in Public Health/ Masters in Social Work/ Masters in Mass Communication – 1 • Multi-Purpose Therapists-2 • General Assistants - 2	Mode of Implementation: Public –Private Partnership Estimation/Scale: • All Taluks in Phases • Medical Colleges • AYUSH Medical Colleges	• Develop 1 month Training Program For Persons Serving as Healthy Heart Educators • Develop Evidence Based AYUSH Heart Disease Prevention Protocols; • Identify & Manage Stress & Lifestyle Risk Factors for Heart Diseases	• Physical & Technical Infrastructure • Audio-Visual sets for An effective Communication • IEC Materials for Patient Education; Physician Education;- Electronic-Digital Media • Planned daily; weekly; monthly; Quarterly; half-yearly and annual Hospital based/campaign based/ Program based programs
b. Training ASHA workers in Healthy Heart Program	Mode of Implementation: Government through AYUSH Heart Disease Prevention Educators Estimation: Identify number of ASHA workers And plan the phased training &	• AYUSH Healthy Heart Educators to train ASHA workers • Group training for 2 days with invited experts • Develop & Update Teaching Resource Materials for the Training Program • Develop Patient Education Materials for the use by ASHA workers	• Training Cost for each group of ASHA workers • IEC Materials for the Training • IEC Material for the Education of Patients by the ASHA workers

	implementation		
c. Public Healthy Heart Campaign	Mode of Implementation: Outsource to a professional agency Print-Electronic-Digital Campaign all through the year and Specially on World Heart Day	• Develop IEC material for patient education • Develop an exclusive portal for AYUSH Healthy Heart	• Develop IEC materials • Campaign plan & execution • Monitor the impact of the campaign
6. Integrative Cardiology/ Cardiac Care:			
Integrative Heart Care Center • Ayurvedic Cardio-Protective Single Herbs • Yoga Therapy • Naturopathyic Therapies & Functional Foods • AYUSH Health Education	Mode of Implementation: Public –Private Partnership Estimation: 30+20=50 centers • District Hospitals • 10 Medical Colleges • 10 AYUSH Medical Colleges	• Ayurveda Physician - 2 • Yoga & Naturopathy Physician -2 • Public Health Professional -1 • Multi-purpose therapists - 4 • Ayurveda Pharmacist - 1 • General Assistants – 2 • 3 Months training for Physicians • on Integrative Cardiology • Develop Training Curriculum And Program • Adopt Evidence Based AYUSH • Integrative Cardiology/Reversal of Heart Disease Protocols • Clinical Data Documentation And registry • Platform for Clinical Trials	• Physical & Technical Infrastructure to house the Integrative Cardiology Care Centers • Establishment & Operational costs • Data Documentation & Registry • Clinical Trial Lab Infrastructure • Professional Resource Materials For Orientation Program for General Physicians & Cardiologists • IEC Materials for Integrative Cardiology with AYUSH Adjunct Intervention
3. Integrative Cardiac Rehab:			

AYUSH Cardiac Rehab Center • Ayurvedic Cardio-Protective Single Herbs • Yoga Therapy • Naturopathyic Therapies & Functional Foods • AYUSH Health Education	Mode of Implementation: Public –Private Partnership Estimation: 3 JayaDeva Heart Institute @ Bengaluru, Mysore, Gulburga	• Ayurveda Physician - 2 • Yoga & Naturopathy Physician - 2 • Multi-purpose therapists - 10 • General Assistants – 4 • 3 Months training for Physicians • on Integrative Cardiology & Cardiac rehab • Develop Training Curriculum • And Program • Adopt Evidence Based AYUSH • Cardiac Rehab Protocols • Clinical Data Documentation And registry	• Physical & Technical Infrastructure to house the Integrative Cardiac Rehab Centers • Establishment & Operational costs • Data Documentation & Registry • Clinical Trial Lab Infrastructure • Professional Resource Materials • For Orientation Program for General Physicians & Cardiologists • IEC Materials for Integrative Cardiac Rehab with AYUSH Adjunct Intervention

GOAL 3.4.8: Mortality rate attributed to Diabetes Mellitus;

% Covered under AYUSH Integrated Diabetes Mellitus Intervention

Action Plan	Implementation	Manpower & Training	Infrastructure & Recurring Costs
1. Preventive Diabetology/Control Obesity:			
a. AYUSH Obesity & Diabetes Units – as part of the AYUSH Wellness Center in each of the 227 Talukas of the State Structure of the **AYUSH Wellness Center** • AYUSH Doctor-1	Mode of Implementation: Public –Private Partnership Estimation/Scale: • All Taluks in Phases • Government & Aided Medical Colleges [57 medical colleges] • AYUSH Government &	• Develop 1 month Training Program For Persons Serving as Obesity & Diabetes Prevention Educators • Develop Evidence Based AYUSH Obesity Prevention Protocols for adults & Children; • Develop Evidence Based AYUSH Diabetes Prevention	• Physical & Technical Infrastructure • Audio-Visual sets for An effective Communication • IEC Materials for Patient Education; Physician Education;-Electronic-Digital Media • Planned daily; weekly; monthly; Quarterly; half-yearly and annual

• Masters in Public Health/ Masters in Social Work/ Masters in Mass Communication – 1 • Multi-Purpose Therapists-2 • General Assistants - 2	Aided Medical Colleges; [80 colleges]	Protocols for adults & Children; • Identify Stress & Lifestyle Risk Factors for Obesity & Diabetes Specially in children & adolescents	Hospital based/campaign based/ Program based programs
b. Training ASHA workers in Obesity & Diabetes Prevention	Mode of Implementation: Government through AYUSH Obesity & Diabetes Prevention Educators Estimation: Identify number of ASHA workers And plan the phased training & implementation	• AYUSH Obesity & Diabetes Prevention Educators to train ASHA workers • Group training for 2 days with invited experts • Develop & Update Teaching Resource Materials for the Training Program • Develop Patient Education Materials for the use by ASHA workers	• Training Cost for each group of ASHA workers • IEC Materials for the Training • IEC Material for the Education of Patients by the ASHA workers
c. Public Obesity & Diabetes Prevention Campaign	Mode of Implementation: Outsource to a professional agency Print-Electronic-Digital Campaign all through the year and Specially on World Diabetes Day	• Develop IEC material for patient education • Develop an exclusive portal for AYUSH Obesity Care • Develop an exclusive portal for AYUSH Diabetes Care	• Develop IEC materials • Campaign plan & execution • Monitor the impact of the campaign
2. Integrative Diabetes/Reversal of Diabetes:			
Integrative Diabetes Care Center	Mode of Implementation:	• 3 Months training for Physicians	• Physical & Technical

• Ayurveda Physician - 2 • Yoga & Naturopathy Physician -2 • Public Health Professional -1 • Multi-purpose therapists - 4 • Ayurveda Pharmacist - 1 • General Assistants - 2	Public –Private Partnership Estimation: 30+21=51 centers • District Hospitals • Karnataka Institute of Diabetology, Bengaluru • 10 Medical Colleges • 10 AYUSH Medical Colleges	on Integrative Diabetology • Develop Training Curriculum And Program • Adopt Evidence Based AYUSH Integrative Diabetes Protocols • Clinical Data Documentation And registry • Platform for Clinical Trials	Infrastructure to house the Integrative Diabetes Care Centers • Establishment & Operational costs • Data Documentation & Registry • Clinical Trial Lab Infrastructure • Professional Resource Materials For Orientation Program for General Physicians & Endocrinologists • IEC Materials for Integrative Diabetology with AYUSH Adjunct Intervention

Department of AYUSH - Proposed budget for 11 years 2019 to 2030 (Rs. In Lakhs)													
Sl no	**Proposed schemes under different Head**	Years	1	2	3	4	5	6	7	8	9	10	11
		From 2019 to 2030	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30
		SDG -3 Target											
1	2210-02-101-1-03 Directorate of AYUSH, District Offices, Colleges	Basic Infrastructures, Equipments, Computers, Contingency , Salary Regular/outsourced	1500	1800	2250	2925	3364	3864	4464	5164	5964	6964	8164
2	2210-02-101-1-05 AYUSH AROGYA,IEC, Training Programs	AYUSH AROGYA Programs, Training Program, Conference, Workshop etc	550	690	790	990	1290	1490	1690	1890	2000	2200	2400
3	2210-02-101-2-04 Setting up of Taluk and District level ayush hospitals and Maintenance	Basic Infrastructures, Equipments, Computers, Contingency, Salary Regular/outsourced, Training	2500	3300	4000	4600	5400	6300	7000	8000	8500	9000	9500
4	2210-05-	Basic Infrastructures,	13000	1625	1925	2325	2800	3400	4000	4900	5900	69	7900

	101-1-03 Colleges attached with Ayurveda Hospitals	Equipments, Computers, Contingency, Salary Regular/outsourced, Trainings										00	
5	2210-05-101-3-01 Government Central Pharmacy, including DTL Bangalore	Basic Infrastructures, Equipments, Computers, Contingency, Salary Regular/outsourced,Trianing, Packing Materials, basic needs	2500	3100	3800	4500	5400	6400	7400	8400	9500	10600	11600
6	2210-05-101-6-00 Medicinal Plants	Salary Regular/Outsourced Maintenance of Horticulture	200	250	375	475	575	675	775	875	975	1075	1175
7	2210-05-102-0-02 Colleges attached with Homeopathy Hospitals	Basic Infrastructures, Equipments, Computers ,Contingency , Salary Regular/outsourced, Training ,	3000	3750	4750	5750	6750	7750	8750	9750	1075	1175	1275
8	2210-05-103-0-01 Unani College Bangalore	Basic Infrastructures, Equipments, Computers, Contingency, Salary Regular/outsourced,	2000	2500	3125	4500	5500	6500	7500	8500	9500	10050	1150

		Trianing											
9	2210-05-200-0-01 Nature Cure and Yoga Colleges	Basic Infrastructures, Equipments, Computers, Contingency, Salary Regular/outsourced, Training	1200	1500	18000	2260	2800	3500	4300	5300	6300	7300	8300
10	2210-05-200-0-04 ayush pg Courses for rasashashastra and Bhayshajya Kalpana.	Salary Regular/outsourced, Scholarship	800	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800
11	2210-05-200-0-11 Opening and ISM &H Units Maintaince of AYUSH Units	Centrally sponsored scheme (National AYUHS Mission) salary, Medicine, diet and other consumables, Maintenance.	4000	5000	6000	7000	8000	9000	10000	11000	12000	13000	14000
12	4210-03-101-1-01 Buildings ISM&H Units	Buildings of AYUSH Hospitals and Dispensaries, offices, hostels etc.	4000	5000	6000	7000	8000	9000	10000	11000	12000	13000	14000
	Total (Rs. In lakhs)		35250	29515	52215	43725	51479	59679	67879	76979	76114	83864	82264

ANNEXURE 4

Challenges of controlling KFD in Karnataka:

Kyasanur Forest Disease is one of tick-borne associated diseases of flaviviruses caused by infected tick bite of HAEMAPHYSALIS SPINGERA. Kyasanur Forest Disease Virus (KFDV) falls in mammalian tickborne virus group, belonging to

family FLAVIVIRIDAE, genus FLAVIVIRUS. It is principally transmitted to humans and animals by tick vector HAEMAPHYSALIS SPINIGERA.

Kyasanur Forest Disease Virus is classified in risk group 4 pathogens and causes endemic disease whose ecology and epidemiology is unpredictable because it is a forest borne disease and involves different vertebrate species (including monkeys, shrews, bats, birds, and small rodents) for its transmission cycle.

As the KFDV reservoir mainly exists in the jungle, controlling the disease emergence becomes an onerous task.

Currently, there is a dearth of co-infection studies linked to KFDV but the incidence of co-infection has recently been reported to be high among ticks and there exists the possibility of KFDV being co-infecting ticks in synergism with other infectious agents.

Infected nymphs and larvae are shed in the forest, mainly by the monkeys, rats, shrews, porcupines, squirrels, and probably a few birds that form enzootic foci. Destruction of infected ticks would necessitate control of ticks throughout the entire forested area, but is not technically and economically feasible. This is the main reason why, once focus of this disease becomes established in any biotope, it cannot be eliminated easily.

People are educated as not to enter forest in and around areas of monkey deaths. But because of socioeconomic reasons this cannot be limited.

In certain areas there is collection of dry leaves which are stored in backyard. Though this is discouraged as risk of ticks in vicinity of houses increases it is difficult to abort these practices.

Preventive measures include use of protective gear which include gum boots, full clothing, gloves by persons who work in fields and enter forests with tick preponderance. But the majority of these population are labour class who do not use these protective gear either due to economic status or due to lack of knowledge feel they are not comfortable to work wearing these gear.

Application of Dimethyl phthalate (DMP oil) supplied freely by government or DEET is required for persons with risk of exposure to tick bites. This application should be done over exposed parts which are susceptible for tick bites. This application is to repeated every 2-3 hours as effectiveness wanes over time.

As association of human infections in the vicinity of dead monkeys has been shown, and the use of spray insecticides has been recommended in a 50-m radius around a dead monkey. However, although recommendations have been made for spraying of insecticides around the place of monkey death, it is technically difficult in certain inaccessible areas to transport the large volumes of water needed for the spray. At present malathion is used for dusting as per Standard operative procedures but other insecticides need to be studied as alternatives for this dusting technique.

For significantly reducing the spread of KFD in Karnataka's five districts, which are endemic, formalin-inactivated tissue culture vaccine has been exploited since 1990.

However, the immunity gained following vaccination is short lived; yearly boosters are suggested for about 5 successive years starting from the time when the latest case in the region was reported. Effectiveness of the vaccines to prevent KFD needs to be adequately demonstrated.

The vaccine involves 2 doses given at an interval of 30 days. Effectiveness starts only after 60 days of first dose of vaccine. Complete immunity is developed only after administration of booster dose given after 9-12 months of 2nd dose of vaccine.